

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HOA VAN LE Examiner #: 60626 Date: 25 October 2004
 Art Unit: 1752 Phone Number: 301-272-1332 Serial Number: 10606845
 Mail Box and Bldg/Room Location: Room 9 D61 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____
 Inventors (please provide full names): please see the attachment
 Earliest Priority Filing Date: _____

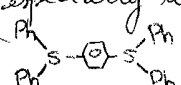
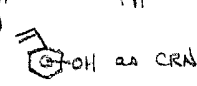
For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

SCIENTIFIC REFERENCE BR
 Sci. & Tech. Info. Cntr

OCT 25

Pat. & T.M. Office

Please search for:

- ① ^{compounds} ~~polymers~~ of the general formula (1) (especially with the elected compound A-1 on page 22 of the specification),  $\text{C}_6\text{H}_5/\text{Ar}-\text{SO}_3^+\text{H}$
- ② alkali-soluble resins, (R-20 on page 69)  OH as CRN
- ③ nitrogen-containing basic compounds, (OE-2 on page 107 as 2,4,5-triphenylimidazole) ✓

SCIENTIFIC REFERENCE BR
 Sci. & Tech. Info. Cntr

Thank you

OCT 26

Pat. & T.M. Office

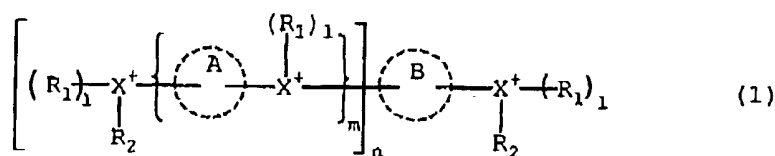
TRIED TO PRINT OUT CLOSEST ART TOWARD THE BEGINNING.
 DON'T PANIC - NOT THAT MANY ACTUAL CITATIONS HERE -
 THE POLYMER PICTURES FOR ITEM ② ARE BIG.

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Ed</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>10-27-04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

WHAT IS CLAIMED IS:

- wherein the composition comprises the compound (A) in an amount of from 3.6 to 15 wt% based on the solid content of the composition:



R₁ and R₂ each independently represents an alkyl group which may have a substituent, or an aryl group which may have a substituent; when a plurality of R₁s are present, the plurality of R₁s may be the same or different; the plurality of R₂s may be the same or different; and R₁ and R₂ may combine to form a ring,

1 represents 0 or 1, and, when X is a sulfur atom, 1
 parenthesizing R₁ connected to X* is 1 and when X is an
 iodine atom, 1 parenthesizing R₁ connected to X* is 0,

n represents an integer of 1 to 5.

(A) a compound generating an acid upon irradiation with actinic rays or radiation, the compound having: a partial structure represented by the following formula (1); and a counter ion; and

wherein the composition comprises the compound (A) in an amount of from 3.6 to 15 wt% based on the solid content of the composition:



wherein X represents a sulfur atom or an iodine atom and the plurality of Xs may be the same or different,

R₁ and R₂ each independently represents an alkyl group which may have a substituent, or an aryl group which may have a substituent; when a plurality of R₁s are present, the plurality of R₁s may be the same or different; the plurality of R₂s may be the same or different; and R₁ and R₂ may combine to form a ring,

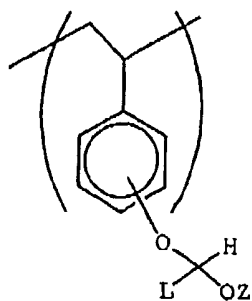
A and B each independently represents a hydrocarbon structure connecting between X⁺s, and at least two of X⁺s connected with B are in a conjugated system ; and when a plurality of As are present, the plurality of As may be the same or different,

l represents 0 or 1, and, when X is a sulfur atom, 1 parenthesizing R₁ connected to X⁺ is 1 and when X is an iodine atom, 1 parenthesizing R₁ connected to X⁺ is 0,

m represents an integer of 0 to 10, and

n represents an integer of 1 to 5.

3. The positive resist composition as claimed in claim 2, wherein the resin (D) is (D1) a resin capable of increasing in the solubility in an alkali developer under the action of an acid, the resin (D1) having a repeating unit represented by the following formula (IV) and a repeating unit represented by the following formula (V):



(IV)



(V)

wherein L represents a hydrogen atom, a linear, branched or cyclic alkyl group which may be substituted, or an aralkyl group which may be substituted,

Z represents a linear, branched or cyclic alkyl group which may be substituted, or an aralkyl group which may be substituted, and

Z and L may combine to form a 5- or 6-membered ring.

4. The positive resist composition as claimed in claim 3, wherein the molar ratio of the repeating unit represented by formula (IV) to the repeating unit represented by formula (V) is (IV)/(V)=10/90 to 40/60.

5. The negative resist composition as claimed in

claim 1, which further comprises (F) a nitrogen-containing basic compound.

6. The positive resist composition as claimed in claim 2, which further comprises (F) a nitrogen-containing basic compound.

7. The negative resist composition as claimed in claim 1, wherein the counter ion in the compound (A) is one of an anion of an aliphatic sulfonic acid and an anion of an aromatic sulfonic acid.

8. The negative resist composition as claimed in claim 7, wherein the anion of an aliphatic sulfonic acid and an anion of an aromatic sulfonic acid contain a fluorine atom as a substituent.

9. The positive resist composition as claimed in claim 2, wherein the counter ion in the compound (A) is one of an anion of an aliphatic sulfonic acid and an anion of an aromatic sulfonic acid.

10. The positive resist composition as claimed in claim 9, wherein the anion of an aliphatic sulfonic acid and an anion of an aromatic sulfonic acid contain a

fluorine atom as a substituent.

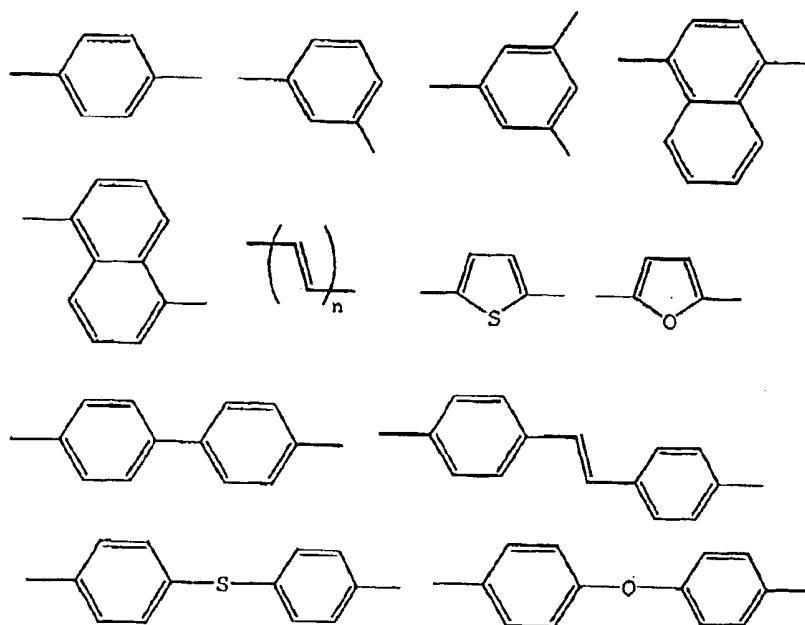
11. The negative resist composition as claimed in claim 1, wherein in the formula (1), B is a benzene ring, n is 1 and m is 0.

12. The positive resist composition as claimed in claim 2, wherein in the formula (1), B is a benzene ring, n is 1 and m is 0.

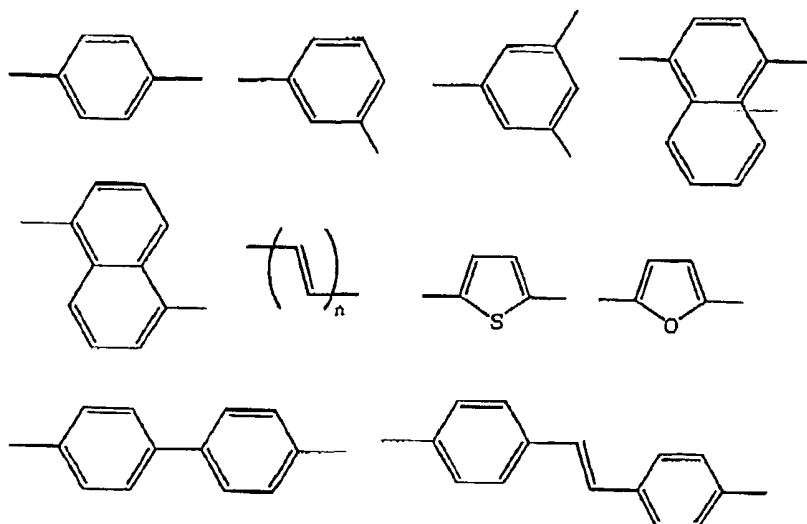
13. The negative resist composition as claimed in claim 1, wherein in the formula (1), the hydrocarbon structure of A is a hydrocarbon structure having: from 4 to 16 carbon atoms; a single bond consisting of (carbon-carbon) bond; and one of a double bond and a triple bond, and the hydrocarbon structure may have an oxygen atom or a sulfur atom.

14. The negative resist composition as claimed in claim 1, wherein in the formula (1), the hydrocarbon structure of B is a conjugated hydrocarbon structure having: from 4 to 16 carbon atoms; a single bond (carbon-carbon) bond; and one of a double bond and a triple bond, and the hydrocarbon structure may have an oxygen atom or a sulfur atom.

15. The negative resist composition as claimed in claim 1, wherein in the formula (1), the hydrocarbon structure of A is one of the followings:



16. The negative resist composition as claimed in claim 1, wherein in the formula (1), the hydrocarbon structure of B is one of the followings:

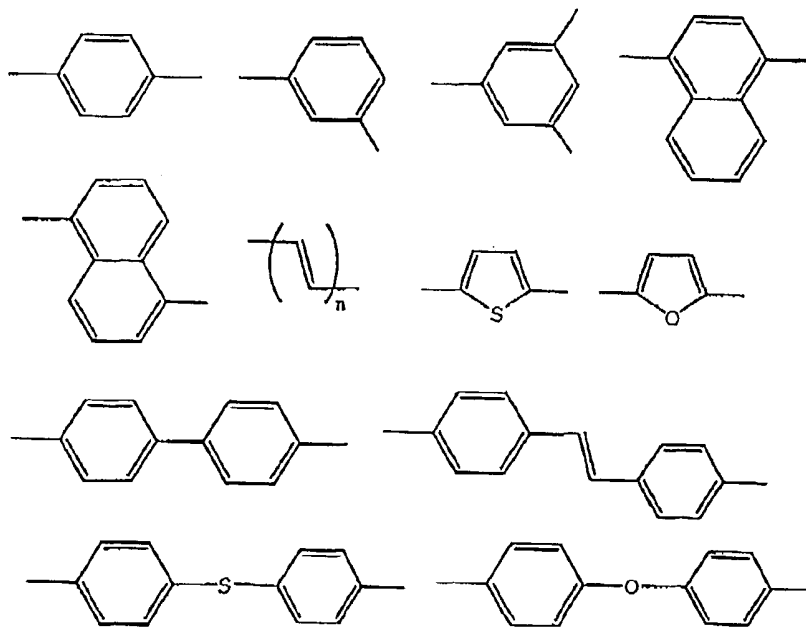


17. The positive resist composition as claimed in claim 2, wherein in the formula (1), the hydrocarbon structure of A is a hydrocarbon structure having: from 4 to 16 carbon atoms; a single bond consisting of (carbon-carbon) bond; and one of a double bond and a triple bond, and the hydrocarbon structure may have an oxygen atom or a sulfur atom.

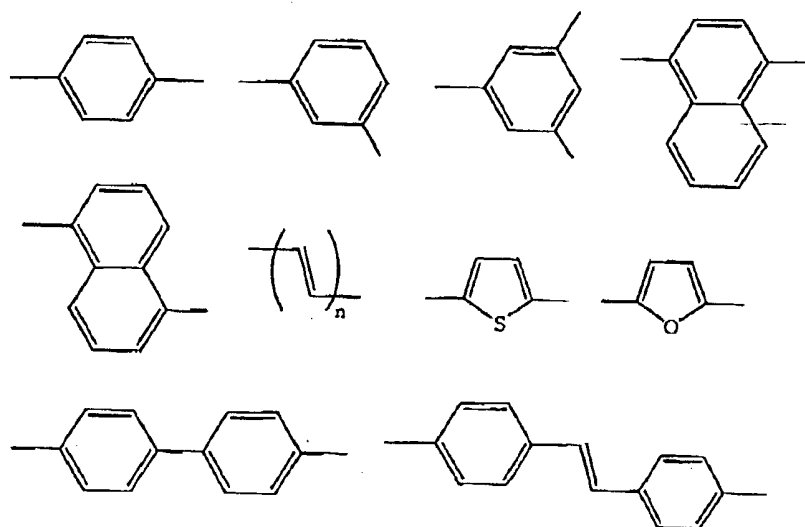
18. The positive resist composition as claimed in claim 2, wherein in the formula (1), the hydrocarbon structure of B is a conjugated hydrocarbon structure having: from 4 to 16 carbon atoms; a single bond (carbon-carbon) bond; and one of a double bond and a triple bond, and the hydrocarbon structure may have an oxygen atom or a

sulfur atom.

19. The positive resist composition as claimed in claim 2, wherein in the formula (1), the hydrocarbon structure of A is one of the followings:



20. The positive resist composition as claimed in claim 2, wherein in the formula (1), the hydrocarbon structure of B is one of the followings:



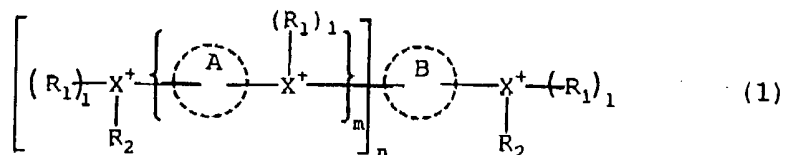
21. A positive resist composition comprising:

(A) a compound generating an acid upon irradiation with actinic rays or radiation, the compound having: a partial structure represented by the following formula (1); and a counter ion;

(B) an alkali-soluble resin; and

(C) a compound capable of increasing in the solubility in an alkali-developer under the action of an acid;

wherein the composition comprises the compound (A) in an amount of from 3.6 to 15 wt% based on the solid content of the composition:



wherein X represents a sulfur atom or an iodine atom and the plurality of Xs may be the same or different,

R₁ and R₂ each independently represents an alkyl group which may have a substituent, or an aryl group which may have a substituent; when a plurality of R₁s are present, the plurality of R₁s may be the same or different; the plurality of R₂s may be the same or different; and R₁ and R₂ may combine to form a ring,

A and B each independently represents a hydrocarbon structure connecting between X⁺s, and at least two of X⁺s connected with B are in a conjugated system; and when a plurality of As are present, the plurality of As may be the same or different,

l represents 0 or 1, and, when X is a sulfur atom, l parenthesizing R₁ connected to X⁺ is 1 and when X is an iodine atom, l parenthesizing R₁ connected to X⁺ is 0,

m represents an integer of 0 to 10, and

n represents an integer of 1 to 5.

=> file reg

FILE 'REGISTRY' ENTERED AT 16:08:31 ON 27 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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=> display history full l1-

FILE 'REGISTRY' ENTERED AT 15:14:00 ON 27 OCT 2004
ACT LE845/A

L1 STR
L2 192 SEA SSS FUL L1

L3 42 SEA L2 AND F/ELS

FILE 'LREGISTRY' ENTERED AT 15:14:56 ON 27 OCT 2004
L4 STR

FILE 'REGISTRY' ENTERED AT 15:17:41 ON 27 OCT 2004
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L6 STR L1
L7 41 SEA SSS SAM L6
L8 2989 SEA SSS FUL L6
SAV L8 LE845B/A
L9 0 SEA SUB=L8 SSS SAM L4
L10 34 SEA SUB=L8 SSS FUL L4
SAV L10 LE845C/A
L11 20 SEA L10 AND F/ELS

FILE 'HCA' ENTERED AT 15:43:09 ON 27 OCT 2004
L12 13 SEA L11
L13 16 SEA L10

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E 2-HYDROXYSTYRENE/CN
L14 1 SEA 2-HYDROXYSTYRENE/CN
E 3-HYDROXYSTYRENE/CN
L15 1 SEA 3-HYDROXYSTYRENE/CN
E 4-HYDROXYSTYRENE/CN
L16 1 SEA 4-HYDROXYSTYRENE/CN
E HYDROXYSTYRENE/CN
L17 1 SEA HYDROXYSTYRENE/CN
L18 4 SEA (L14 OR L15 OR L16 OR L17)
SEL L18 1-4 RN

EDIT E1-E4 /BI /CRN

L19 2190 SEA (2628-17-3/CRN OR 31257-96-2/CRN OR 620-18-8/CRN OR
695-84-1/CRN)

L20 2172 SEA L19 AND PMS/CI

FILE 'HCA' ENTERED AT 15:47:59 ON 27 OCT 2004

L21 1645 SEA L8

L22 5018 SEA L20

L23 4 SEA L22 AND (L12 OR L13)

L24 79 SEA L21 AND L22

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E DBN/CN

L25 3 SEA DBN/CN
D L25 1-3 IDE
SEL L25 2 RN

L26 1 SEA 3001-72-7/BI
E 2,4,5-TRIPHENYLMIDAZOLE/CN

L27 1 SEA "2,4,5-TRIPHENYLMIDAZOLE"/CN
E 4-DIMETHYLAMINOPYRIDINE/CN

L28 1 SEA "4-DIMETHYLAMINOPYRIDINE MONOHYDROCHLORIDE"/CN
E 4-PYRIDINAMINE, N,N-DIMETHYL-/CN

L29 1 SEA "4-PYRIDINAMINE, N,N-DIMETHYL-/CN
E TRI-N-BUTYLAMINE/CN

L30 2 SEA TRI-N-BUTYLAMINE/CN OR "TRI-N-BUTYLAMINE HYDROCHLORID
E"/CN

L31 6 SEA L26 OR L27 OR L28 OR L29 OR L30

FILE 'HCA' ENTERED AT 15:57:01 ON 27 OCT 2004

L32 7902 SEA L31

L33 54 SEA L32 AND L21

L34 26 SEA L33 AND L22

L35 90281 SEA ((PHOTO OR LIGHT OR PHOTOLY?) (2A) (RX# OR RXN# OR
REACT? OR SENSITI? OR POLYM? OR CURE# OR CURING# OR
CURAB? OR CROSSLINK? OR CROSS(W)LINK? OR CAT# OR
CATALY?))/BI,AB

L36 100693 SEA ((ULTRAVIOLET? OR ULTRA(W)VIOLET? OR UV# OR SUV OR
LUV OR RADIA? OR IRRADIA? OR EMANAT? OR EMIT? OR EMISS?
OR LASER?) (2A) (RX# OR RXN# OR REACT? OR REACT? OR POLYM?
OR CURE# OR CURING# OR CURAB? OR CAT# OR CATALY? OR
CROSS(W)LINK? OR CROSSLINK?))/BI,AB

L37 161503 SEA (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM
? OR PHOTOCUR? OR PHOTOHARDEN? OR PHOTOCROSS? OR
PHOTOCAT?)/BI,AB

L38 79137 SEA RESIST OR RESISTS OR PHOTORESIST?

L39 78 SEA L24 AND (L35 OR L36 OR L37 OR L38)

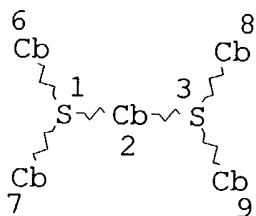
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L41 9 SEA L13 AND (L35 OR L36 OR L37 OR L38)

L42 4 SEA L23 AND (L35 OR L36 OR L37 OR L38)
 L43 26 SEA L34 AND (L35 OR L36 OR L37 OR L38)
 L44 4 SEA L23 OR L42
 L45 12 SEA (L40 OR L41 OR L12 OR L13) NOT L44
 L46 23 SEA (L34 OR L43) NOT (L44 OR L45)

FILE 'REGISTRY' ENTERED AT 16:08:31 ON 27 OCT 2004

=> d l10 que stat
L4 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 6

GGCAT IS UNS AT 7

GGCAT IS UNS AT 8

GGCAT IS UNS AT 9

DEFAULT ECLEVEL IS LIMITED

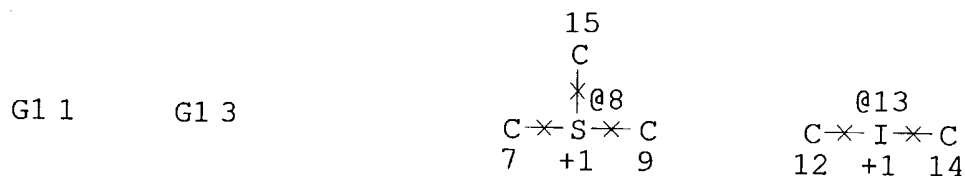
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L6 STR



VAR G1=8/13

NODE ATTRIBUTES:

CHARGE IS E+1 AT 8

CHARGE IS E+1 AT 13

NSPEC IS RC AT 7

NSPEC IS RC AT 9

NSPEC IS RC AT 12
NSPEC IS RC AT 14
NSPEC IS RC AT 15
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
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L10 34 SEA FILE=REGISTRY SUB=L8 SSS FUL L4

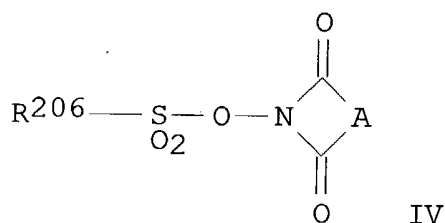
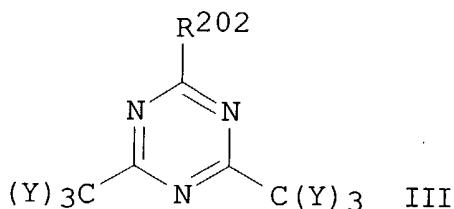
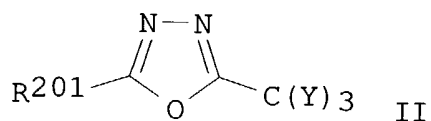
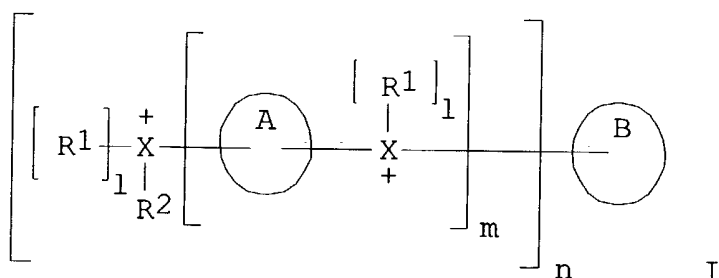
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=> d 144 1-4 cbib abs hitstr hitind

L44 ANSWER 1 OF 4 HCA COPYRIGHT 2004 ACS on STN
140:311990 Chemically amplified negative and positive
photoresist compositions with high resolution giving good
pattern profiles with no foreign substance. Takahashi, Akira;
Mizutani, Kazuyoshi; Yasunami, Shoichiro (Fuji Photo Film Co., Ltd.,
Japan). Jpn. Kokai Tokkyo Koho JP 2004101645 A2 20040402, 78 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-260267 20020905.

GI



AB The neg. **photoresist** compns. comprise (A) photoacid generators having structures I (X = S, iodine; R¹, R² = alkyl, aryl; A, B = hydrocarbon group linking X⁺, at least one of the X⁺ in the same conjugation; l = 0 when X = iodine; l = 1 when X = S; m = 0-10; n = 1-6; n .gtoreq.2 when m = 0) and counter ions, (B) other photoacid generators selected from II (R²⁰¹ = aryl, alkenyl; Y = Cl, Br), III (R²⁰² = aryl, alkenyl, alkyl, CY₃; Y = same as above), Ar₃(SO₂)₂Ar₄ (Ar₃, Ar₄ = aryl), IV (R²⁰⁶ = alkyl, aryl; A = alkylene, alkenylene, arylene), and (RSO₂)₂C:N₂ (R = alkyl, aryl), (C) alkali-sol. resins, and (D) crosslinkers reacting with the resins in the presence of acids. The pos. compns. contain, instead of C and D, resins increasing their alkali soly. in the presence of acids. The **photoresists** are sensitive to electron beams, x-ray beams, or extreme UV (EUV).

IT 129674-22-2 158593-28-3 159296-87-4
177034-75-2 200808-68-0 279244-37-0
288620-13-3 372968-15-5 610301-50-3
676552-70-8

(acid-decomposable resin; chem. amplified neg. and pos.)

photoresists with high resoln. giving good pattern
profiles with no foreign substance)

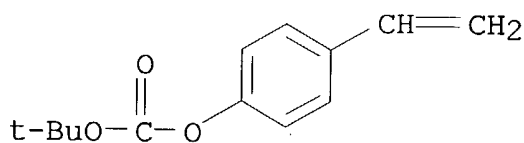
RN 129674-22-2 HCA

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CM 1

CRN 87188-51-0

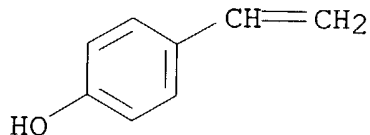
CMF C13 H16 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



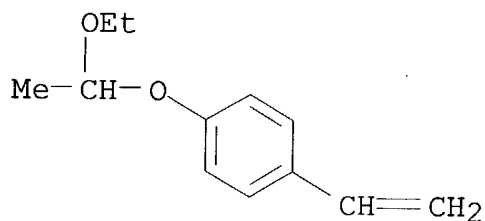
RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0

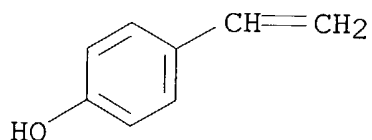
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CM 2

CRN 2628-17-3

CMF C8 H8 O



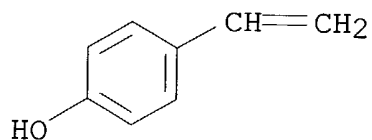
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CM 1

CRN 2628-17-3

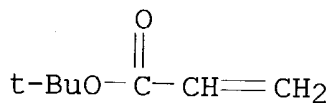
CMF C8 H8 O



CM 2

CRN 1663-39-4

CMF C7 H12 O2



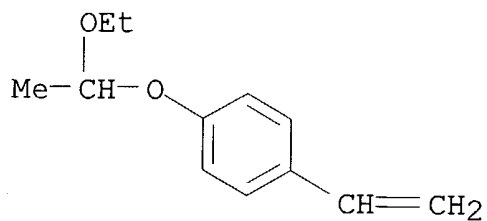
RN 177034-75-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with
1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 157057-20-0

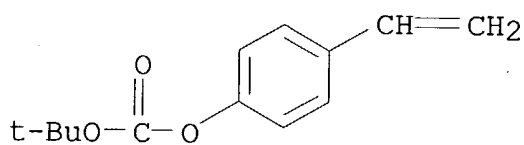
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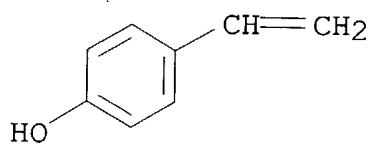
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CM 3

CRN 2628-17-3

CMF C8 H8 O



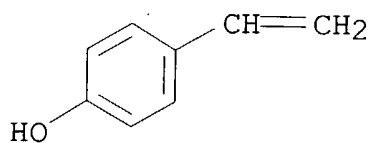
RN 200808-68-0 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

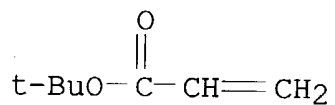
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CM 2

CRN 1663-39-4

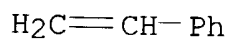
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CM 3

CRN 100-42-5

CMF C8 H8



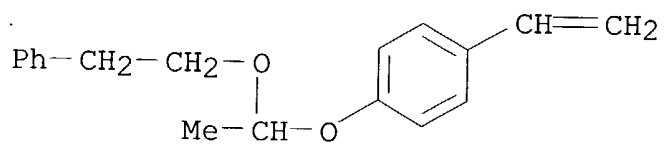
RN 279244-37-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

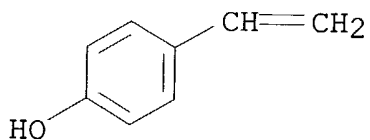
CMF C18 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



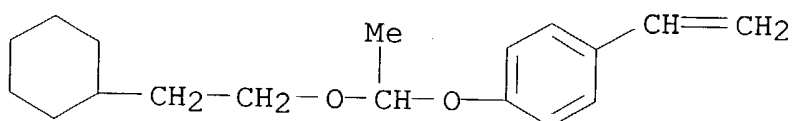
RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

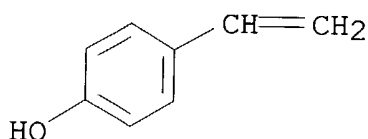
CMF C18 H26 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



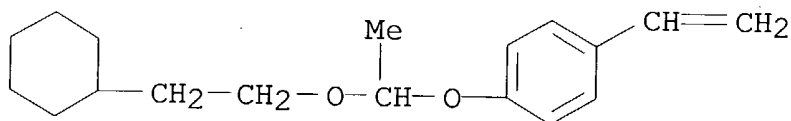
RN 372968-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

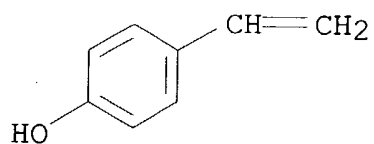
CMF C18 H26 O2



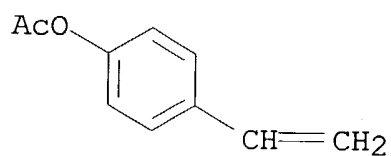
CM 2

CRN 2628-17-3

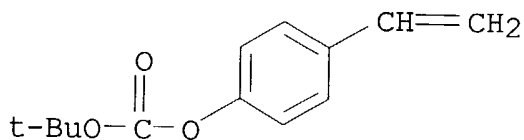
CMF C8 H8 O



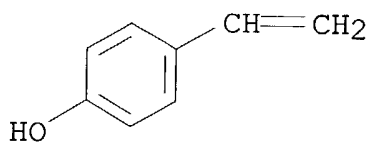
CM 3

CRN 2628-16-2
CMF C10 H10 O2RN 610301-50-3 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

CRN 87188-51-0
CMF C13 H16 O3

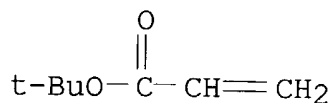
CM 2

CRN 2628-17-3
CMF C8 H8 O

CM 3

CRN 1663-39-4

CMF C7 H12 O2



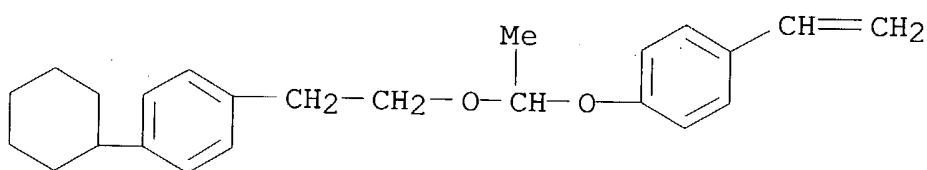
RN 676552-70-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-cyclohexyl-4-[2-[1-(4-ethenylphenoxy)ethoxy]ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 586363-86-2

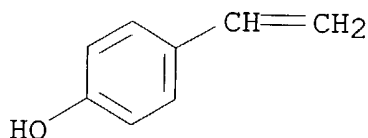
CMF C24 H30 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IT 24979-69-9 24979-70-2 24979-73-5
 24979-74-6 135648-85-0 149614-53-9
 171429-59-7 185405-14-5 204065-67-8
 321164-59-4 345212-27-3 345212-56-8
 345212-59-1 349619-68-7 396098-38-7
 575464-71-0

(alkali-sol. resin; chem. amplified neg. and pos.
photoresists with high resoln. giving good pattern
 profiles with no foreign substance)

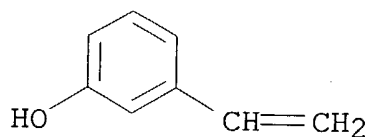
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



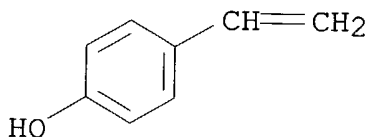
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



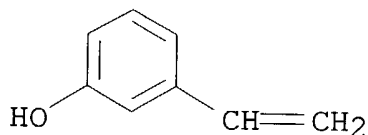
RN 24979-73-5 HCA

CN Phenol, 3-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

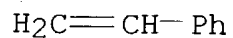
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



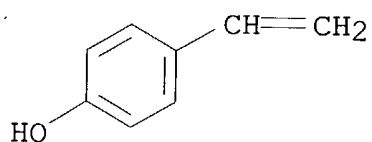
RN 24979-74-6 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

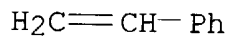
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



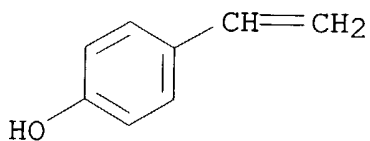
RN 135648-85-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

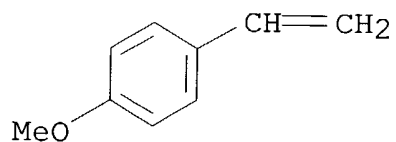
CMF C8 H8 O



CM 2

CRN 637-69-4

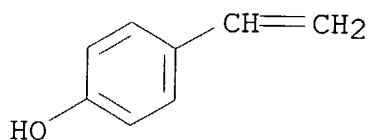
CMF C9 H10 O



RN 149614-53-9 HCA
CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

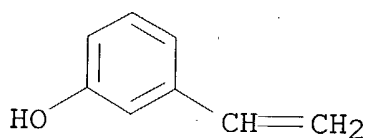
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

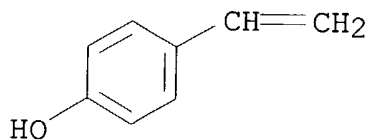
CRN 620-18-8
CMF C8 H8 O



RN 171429-59-7 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

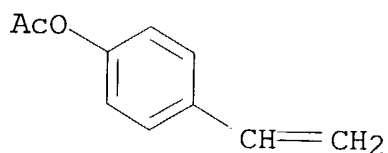
CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 2628-16-2

CMF C10 H10 O2



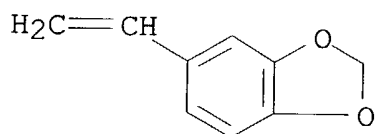
RN 185405-14-5 HCA

CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,3-benzodioxole (9CI)
(CA INDEX NAME)

CM 1

CRN 7315-32-4

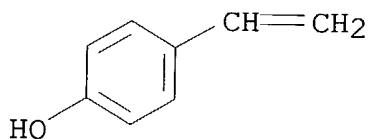
CMF C9 H8 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



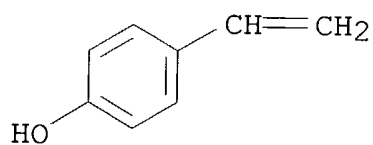
RN 204065-67-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-methylbenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 2628-17-3

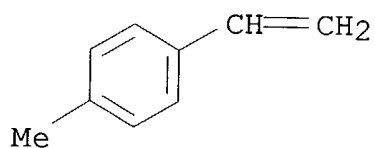
CMF C8 H8 O



CM 2

CRN 622-97-9

CMF C9 H10



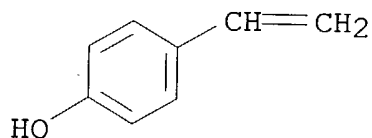
RN 321164-59-4 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 2628-17-3

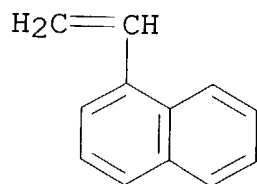
CMF C8 H8 O



CM 2

CRN 826-74-4

CMF C12 H10

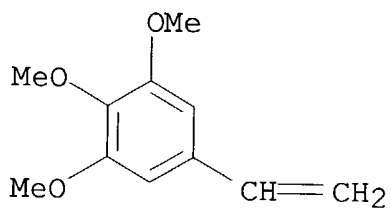


RN 345212-27-3 HCA
CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,2,3-trimethoxybenzene
(9CI) (CA INDEX NAME)

CM 1

CRN 13400-02-7

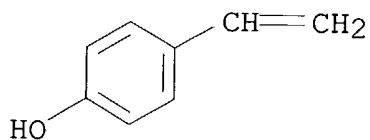
CMF C11 H14 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O

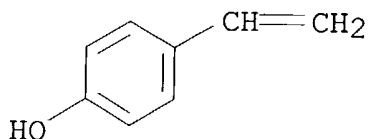


RN 345212-56-8 HCA
CN Phenol, 4-ethenyl-, polymer with 2-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

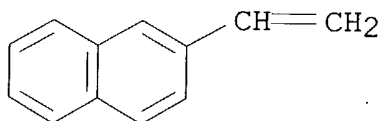
CRN 2628-17-3

CMF C8 H8 O



CM 2

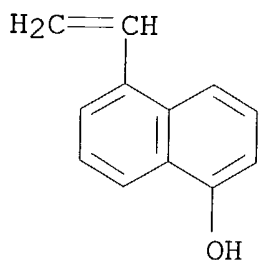
CRN 827-54-3
CMF C12 H10



RN 345212-59-1 HCA
CN 1-Naphthalenol, 5-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

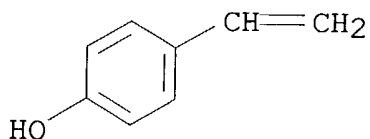
CM 1

CRN 345212-58-0
CMF C12 H10 O



CM 2

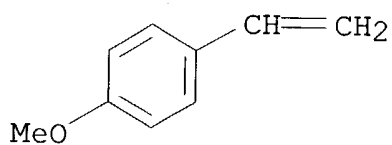
CRN 2628-17-3
CMF C8 H8 O



RN 349619-68-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI) (CA INDEX NAME)

CM 1

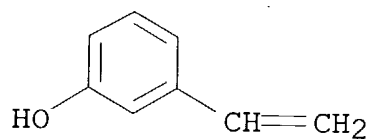
CRN 637-69-4
CMF C9 H10 O



CM 2

CRN 620-18-8

CMF C8 H8 O



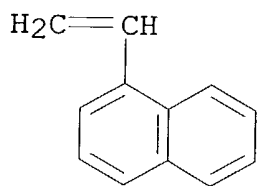
RN 396098-38-7 HCA

CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 826-74-4

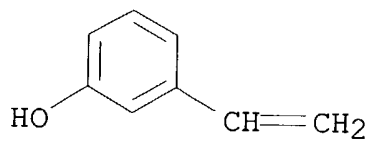
CMF C12 H10



CM 2

CRN 620-18-8

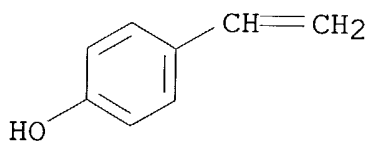
CMF C8 H8 O



RN 575464-71-0 HCA
 CN Phenol, 4-ethenyl-, polymer with ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

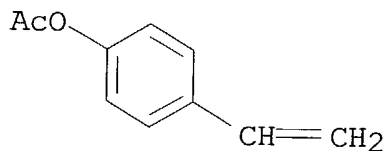
CM 1

CRN 2628-17-3
 CMF C8 H8 O



CM 2

CRN 2628-16-2
 CMF C10 H10 O2



CM 3

CRN 100-42-5
 CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IT 100093-00-3 641638-14-4 641638-15-5
 641638-16-6 641638-17-7 641638-19-9
 641638-21-3 641638-26-8 641638-32-6
 672326-93-1 676552-69-5

(photoacid generator; chem. amplified neg. and pos.
photoresists with high resolu. giving good pattern
 profiles with no foreign substance)

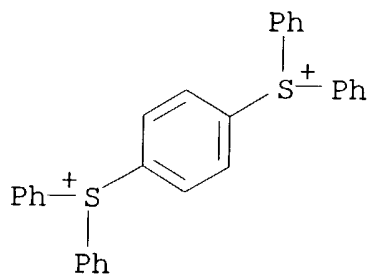
RN 100093-00-3 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, bis[hexafluorophosphate(1-)]
 (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

CMF C30 H24 S2

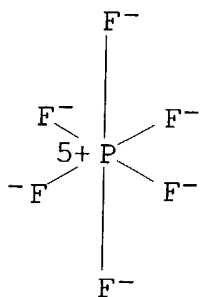


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



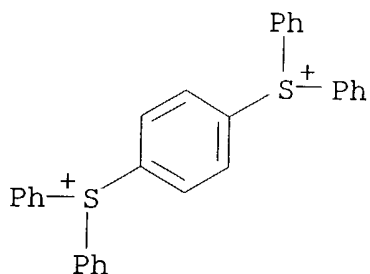
RN 641638-14-4 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
 INDEX NAME)

CM 1

CRN 100092-99-7

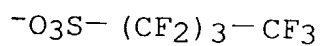
CMF C30 H24 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



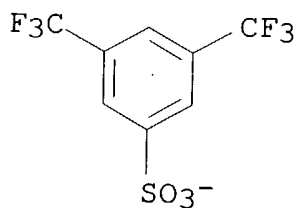
RN 641638-15-5 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
3,5-bis(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 213740-84-2

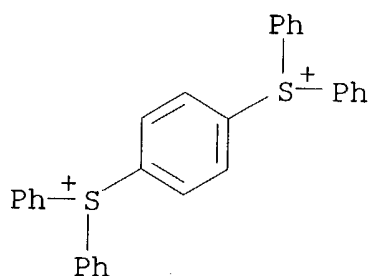
CMF C8 H3 F6 O3 S



CM 2

CRN 100092-99-7

CMF C30 H24 S2

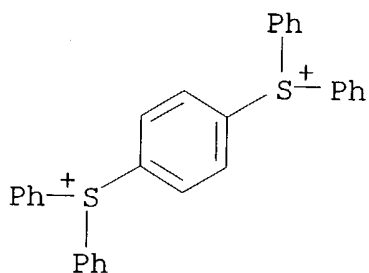


RN 641638-16-6 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

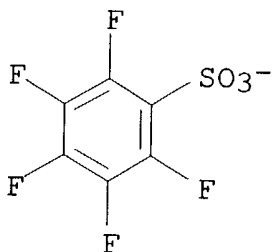
CMF C30 H24 S2



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



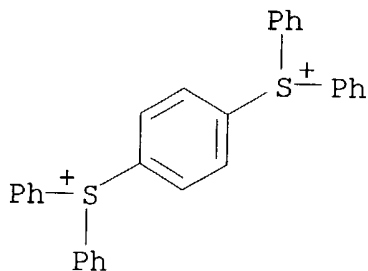
RN 641638-17-7 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with

2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

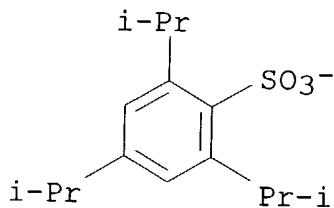
CMF C30 H24 S2



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



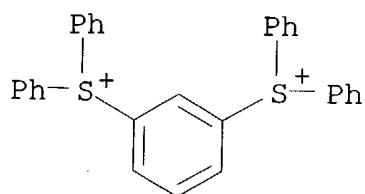
RN 641638-19-9 HCA

CN Sulfonium, 1,3-phenylenebis[diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 641638-18-8

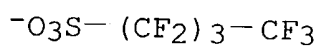
CMF C30 H24 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



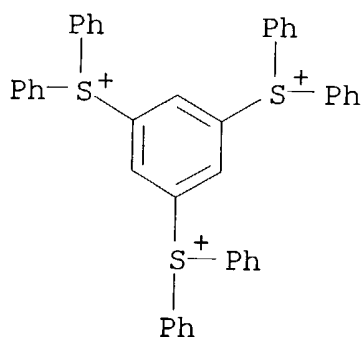
RN 641638-21-3 HCA

CN Sulfonium, 1,3,5-benzenetriyltris[diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:3) (9CI) (CA
INDEX NAME)

CM 1

CRN 641638-20-2

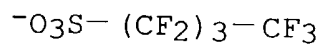
CMF C42 H33 S3



CM 2

CRN 45187-15-3

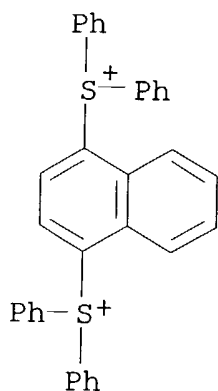
CMF C4 F9 O3 S



RN 641638-26-8 HCA
 CN Sulfonium, 1,4-naphthalenediylbis[diphenyl-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
 INDEX NAME)

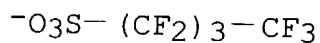
CM 1

CRN 641638-25-7
 CMF C34 H26 S2



CM 2

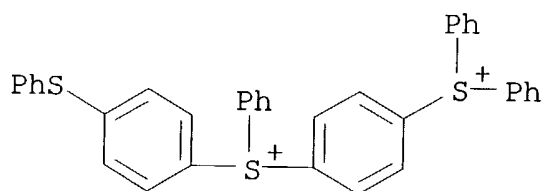
CRN 45187-15-3
 CMF C4 F9 O3 S



RN 641638-32-6 HCA
 CN Sulfonium, diphenyl[4-[phenyl[4-(phenylthio)phenyl]sulfonio]phenyl]-
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2)
 (9CI) (CA INDEX NAME)

CM 1

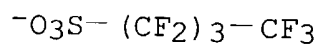
CRN 641638-31-5
 CMF C36 H28 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



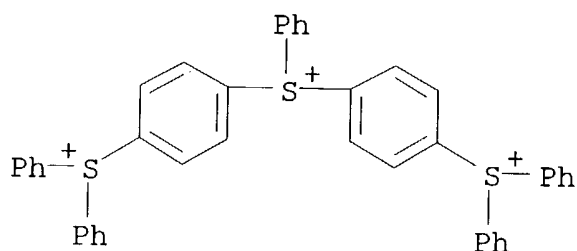
RN 672326-93-1 HCA

CN Sulfonium, bis[4-(diphenylsulfonio)phenyl]phenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA
INDEX NAME)

CM 1

CRN 100093-01-4

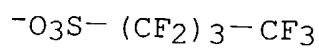
CMF C42 H33 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



RN 676552-69-5 HCA

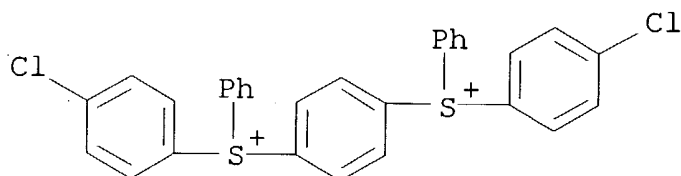
CN Sulfonium, 1,4-phenylenebis[(4-chlorophenyl)phenyl-, salt with

2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 641638-22-4

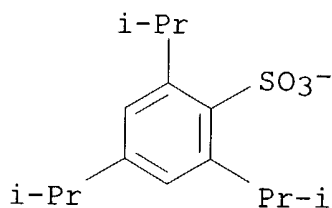
CMF C30 H22 Cl2 S2



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



IT 144767-83-9P

(photoacid generator; chem. amplified neg. and pos. photoresists with high resoln. giving good pattern profiles with no foreign substance)

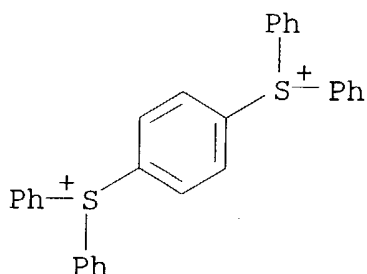
RN 144767-83-9 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

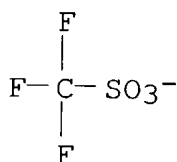
CMF C30 H24 S2



CM 2

CRN 37181-39-8

CMF C F3.03 S



- IC ICM G03F007-004
ICS G03F007-038; G03F007-039; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST pos **photoresist** photoacid generator sulfonium resolu; neg **photoresist** iodonium PAD chem amplification
- IT Negative **photoresists**
Positive **photoresists**
(chem. amplified neg. and pos. **photoresists** with high resolu. giving good pattern profiles with no foreign substance)
- IT 102-82-9, Tri-n-butylamine 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 3001-72-7, 1,5-Diazabicyclo[4.3.0]non-5-ene
(N-contg. basic compd.; chem. amplified neg. and pos. **photoresists** with high resolu. giving good pattern profiles with no foreign substance)
- IT 129674-22-2 158593-28-3 159296-87-4
177034-75-2 200808-68-0 279244-37-0
288620-13-3 372968-15-5 610301-50-3
676552-70-8
(acid-decomposable resin; chem. amplified neg. and pos. **photoresists** with high resolu. giving good pattern profiles with no foreign substance)
- IT 24979-69-9 24979-70-2 24979-73-5

24979-74-6 135648-85-0 149614-53-9
 171429-59-7 185405-14-5 204065-67-8
 219838-71-8 321164-59-4 345212-27-3
 345212-56-8 345212-59-1 349619-68-7
 354589-43-8 396098-38-7 575464-71-0

(alkali-sol. resin; chem. amplified neg. and pos.
photoresists with high resolu. giving good pattern
 profiles with no foreign substance)

IT 138996-14-2P

(chem. amplified neg. and pos. **photoresists** with high
 resolu. giving good pattern profiles with no foreign substance)

IT 139-66-2, Diphenylsulfide 536-80-1, Iodosylbenzene 1493-13-6,
 Trifluoromethanesulfonic acid

(chem. amplified neg. and pos. **photoresists** with high
 resolu. giving good pattern profiles with no foreign substance)

IT 3089-11-0 161679-94-3 185502-14-1 197087-74-4 346694-58-4
 (crosslinker; chem. amplified neg. and pos. **photoresists**
 with high resolu. giving good pattern profiles with no foreign
 substance)

IT 10409-07-1 13603-79-7 14159-45-6 23928-87-2 39153-56-5
 41580-58-9 56530-39-3 58113-98-7 69432-40-2 85342-62-7
 97802-84-1 100093-00-3 104080-40-2 138529-81-4
 138529-84-7 142096-70-6 153698-67-0 194712-93-1 324771-13-3
 350249-87-5 426832-92-0 641638-14-4 641638-15-5
 641638-16-6 641638-17-7 641638-19-9
 641638-21-3 641638-26-8 641638-27-9
 641638-28-0 641638-30-4 641638-32-6 672326-93-1
 676552-69-5

(photoacid generator; chem. amplified neg. and pos.
photoresists with high resolu. giving good pattern
 profiles with no foreign substance)

IT 144767-83-9P

(photoacid generator; chem. amplified neg. and pos.
photoresists with high resolu. giving good pattern
 profiles with no foreign substance)

L44 ANSWER 2 OF 4 HCA COPYRIGHT 2004 ACS on STN

140:294782 **Resist** composition. Takahashi, Hyou; Mizutani,
 Kazuyoshi; Yasunami, Shoichiro (Fuji Photo Film Co., Ltd., Japan).
 U.S. Pat. Appl. Publ. US 2004058272 A1 20040325, 54 pp. (English).
 CODEN: USXXCO. APPLICATION: US 2003=654942-20030905. PRIORITY: JP
 2002-261401 20020906.

AB A neg. type **resist** compn. comprises: (A1) a compd.
 generating a sulfonic acid upon irradiation with actinic rays or a
 radiation and having the specific formula, (A2) a compd. generating
 a sulfonic acid upon irradiation with actinic rays or a radiation and
 having the specific structure, (B) an alkali-sol. resin, and (C) a
 crosslinking agent capable of carrying out an addition reaction with

the alkali-sol. resin which is the component (B) by the action of an acid.

IT 144767-83-9P

(acid generator; **resist** compn. contg.)

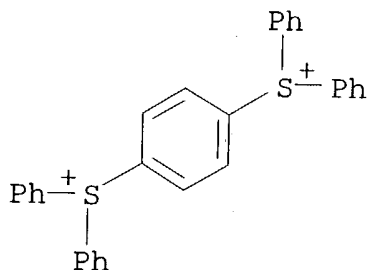
RN 144767-83-9 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

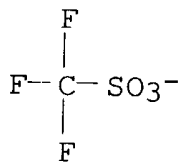
CMF C30 H24 S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IT 641638-14-4 641638-15-5 641638-16-6

641638-17-7 641638-26-8 641638-32-6

672326-93-1 672326-95-3

(acid generator; **resist** compn. contg.)

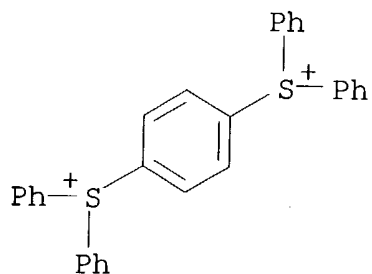
RN 641638-14-4 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

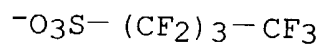
CMF C30 H24 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



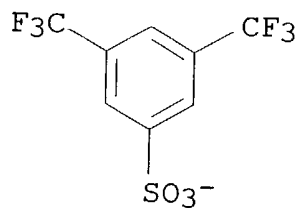
RN 641638-15-5 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
3,5-bis(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 213740-84-2

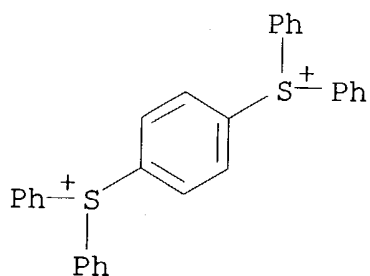
CMF C8 H3 F6 O3 S



CM 2

CRN 100092-99-7

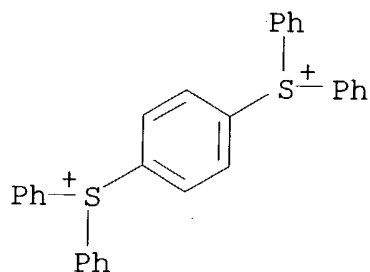
CMF C30 H24 S2



RN 641638-16-6 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

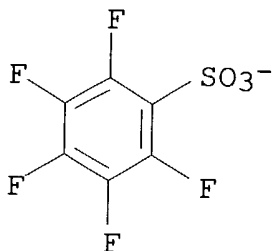
CM 1

CRN 100092-99-7
 CMF C30 H24 S2



CM 2

CRN 46377-88-2
 CMF C6 F5 O3 S



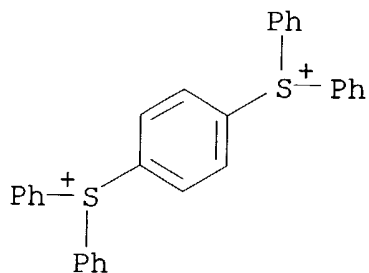
RN 641638-17-7 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with

2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

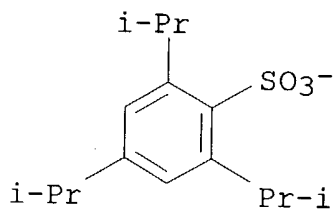
CMF C30 H24 S2



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



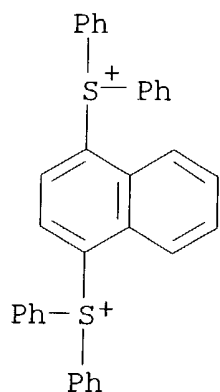
RN 641638-26-8 HCA

CN Sulfonium, 1,4-naphthalenediylbis[diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 641638-25-7

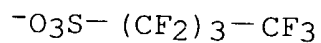
CMF C34 H26 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



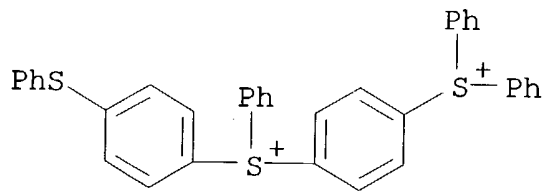
RN 641638-32-6 HCA

CN Sulfonium, diphenyl[4-[phenyl[4-(phenylthio)phenyl]sulfonio]phenyl]-
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2)
 (9CI) (CA INDEX NAME)

CM 1

CRN 641638-31-5

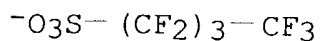
CMF C36 H28 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

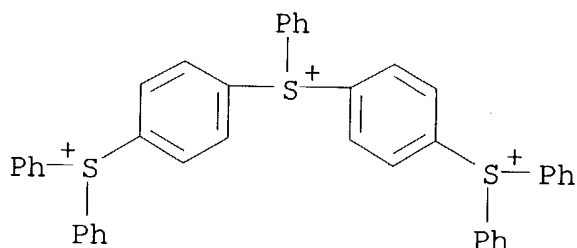


RN 672326-93-1 HCA
 CN Sulfonium, bis[4-(diphenylsulfonio)phenyl]phenyl-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA
 INDEX NAME)

CM 1

CRN 100093-01-4

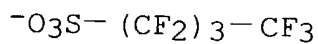
CMF C42 H33 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

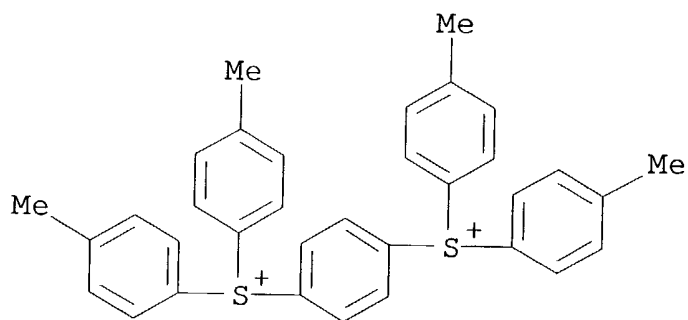


RN 672326-95-3 HCA
 CN Sulfonium, 1,4-phenylenebis[bis(4-methylphenyl)-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
 INDEX NAME)

CM 1

CRN 672326-94-2

CMF C34 H32 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}\text{O}_3\text{S}-(\text{CF}_2)_3-\text{CF}_3$

IT 24979-69-9 24979-70-2 24979-73-5
 24979-74-6 129674-22-2 135648-85-0
 149614-53-9 158593-28-3 159296-87-4
 171429-59-7 177034-75-2 185405-14-5
 200808-68-0 204065-67-8 279244-37-0
 288620-13-3 321164-59-4 345212-27-3
 345212-56-8 345212-59-1 349619-68-7
 372968-15-5 396098-38-7 575464-71-0
 675836-60-9

(alkali-sol. resin; **resist** compn. contg.)

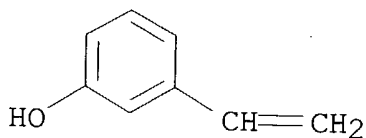
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



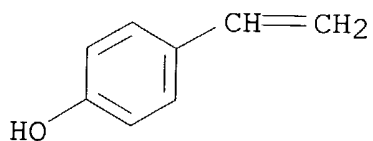
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



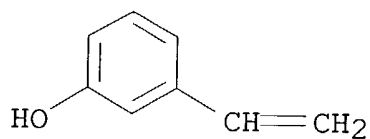
RN 24979-73-5 HCA

CN Phenol, 3-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

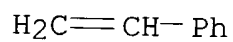
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



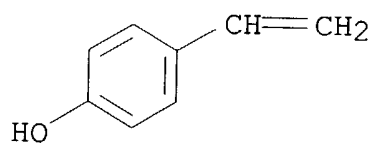
RN 24979-74-6 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

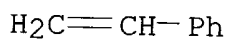
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



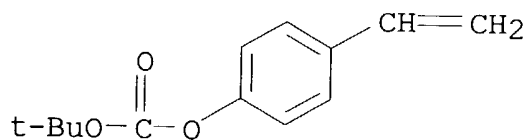
RN 129674-22-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 87188-51-0

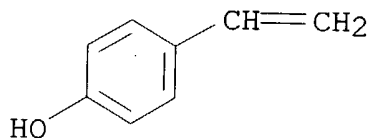
CMF C13 H16 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O

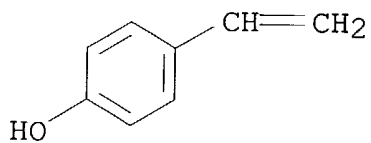


RN 135648-85-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI) (CA INDEX NAME)

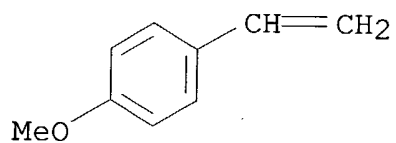
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

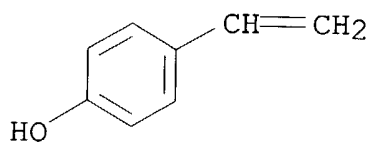
CRN 637-69-4
CMF C9 H10 O



RN 149614-53-9 HCA
CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

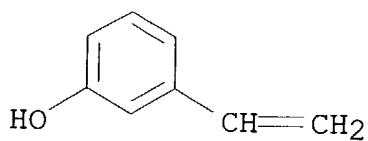
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

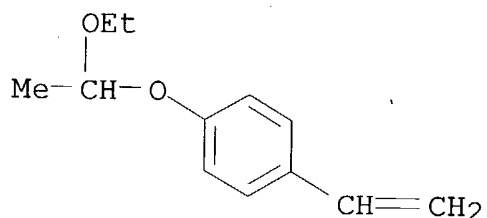
CRN 620-18-8
CMF C8 H8 O



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

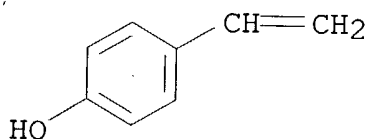
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

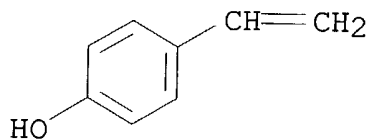
CRN 2628-17-3
CMF C8 H8 O



RN 159296-87-4 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

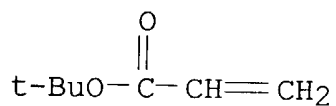
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

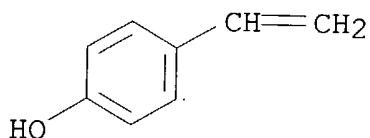
CRN 1663-39-4
CMF C7 H12 O2



RN 171429-59-7 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

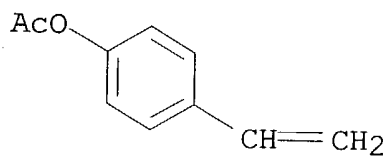
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

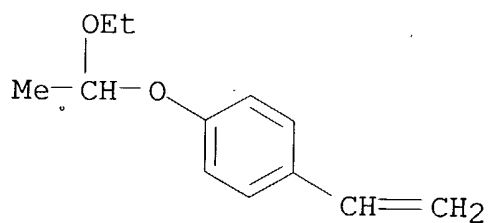
CRN 2628-16-2
CMF C10 H10 O2



RN 177034-75-2 HCA
CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

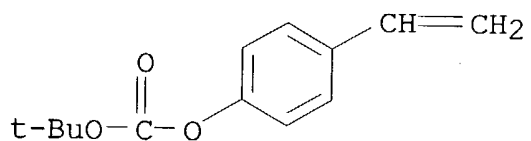
CRN 157057-20-0
CMF C12 H16 O2



CM 2

CRN 87188-51-0

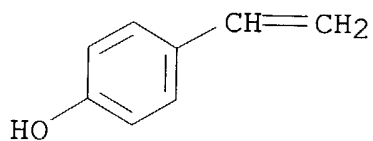
CMF C13 H16 O3



CM 3

CRN 2628-17-3

CMF C8 H8 O



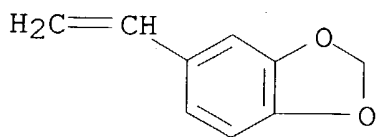
RN 185405-14-5 HCA

CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,3-benzodioxole (9CI)
(CA INDEX NAME)

CM 1

CRN 7315-32-4

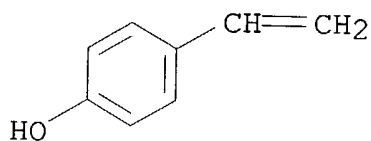
CMF C9 H8 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



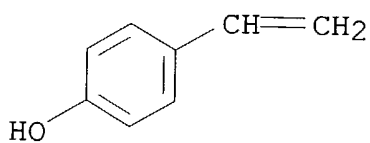
RN 200808-68-0 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

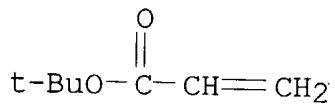
CMF C8 H8 O



CM 2

CRN 1663-39-4

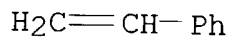
CMF C7 H12 O2



CM 3

CRN 100-42-5

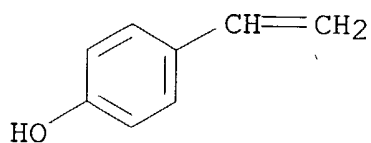
CMF C8 H8



RN 204065-67-8 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-methylbenzene (9CI)
 (CA INDEX NAME)

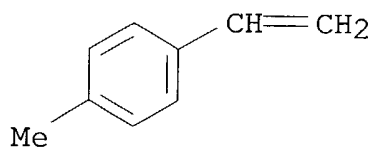
CM 1

CRN 2628-17-3
 CMF C8 H8 O



CM 2

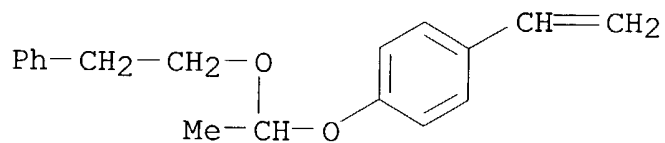
CRN 622-97-9
 CMF C9 H10



RN 279244-37-0 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

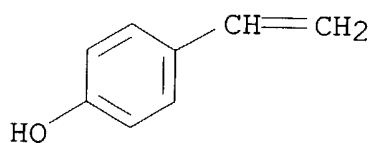
CM 1

CRN 246157-37-9
 CMF C18 H20 O2



CM 2

CRN 2628-17-3
 CMF C8 H8 O



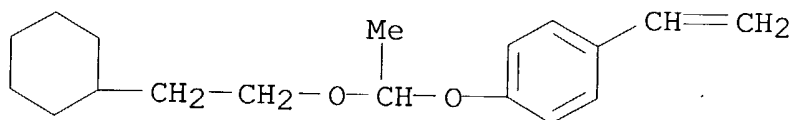
RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

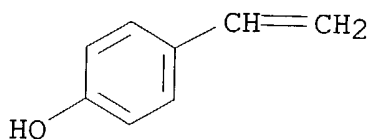
CMF C18 H26 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



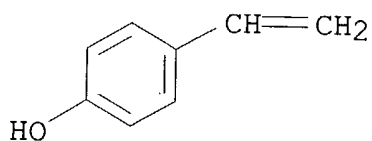
RN 321164-59-4 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

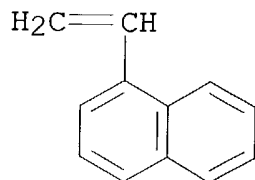
CMF C8 H8 O



CM 2

CRN 826-74-4

CMF C12 H10



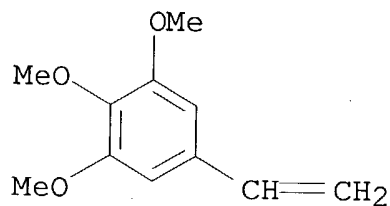
RN 345212-27-3 HCA

CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,2,3-trimethoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 13400-02-7

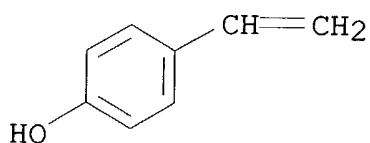
CMF C11 H14 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



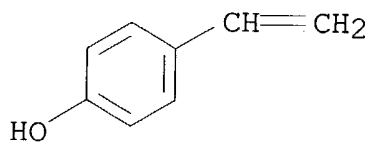
RN 345212-56-8 HCA

CN Phenol, 4-ethenyl-, polymer with 2-ethylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

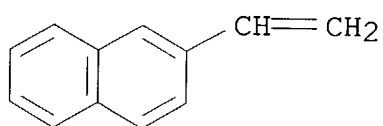
CMF C8 H8 O



CM 2

CRN 827-54-3

CMF C12 H10



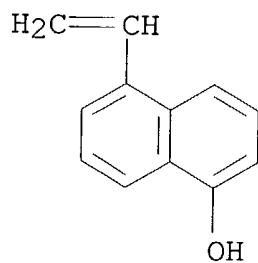
RN 345212-59-1 HCA

CN 1-Naphthalenol, 5-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-58-0

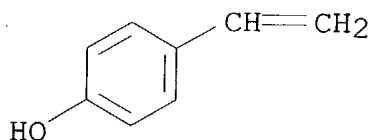
CMF C12 H10 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



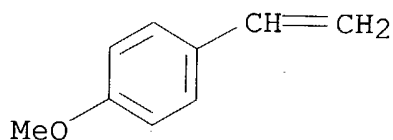
RN 349619-68-7 HCA

CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 637-69-4

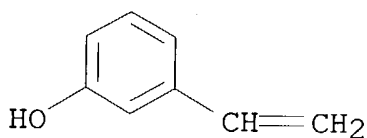
CMF C9 H10 O



CM 2

CRN 620-18-8

CMF C8 H8 O



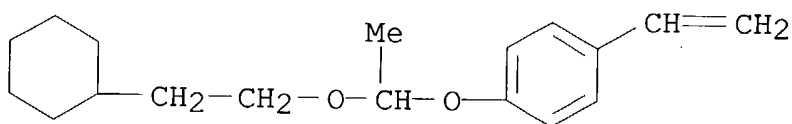
RN 372968-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

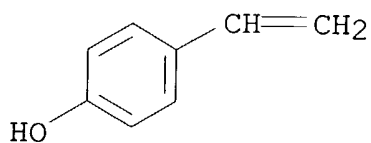
CMF C18 H26 O2



CM 2

CRN 2628-17-3

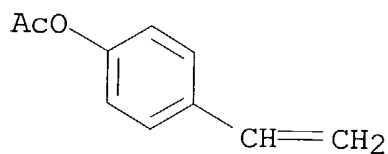
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



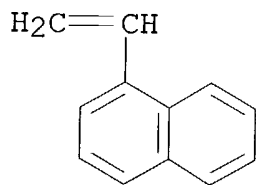
RN 396098-38-7 HCA

CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 826-74-4

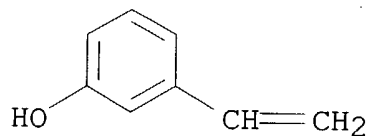
CMF C12 H10



CM 2

CRN 620-18-8

CMF C8 H8 O



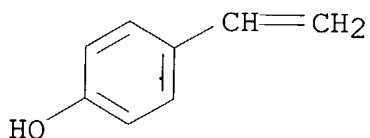
RN 575464-71-0 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

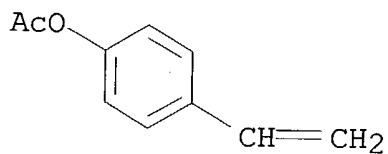
CMF C8 H8 O



CM 2

CRN 2628-16-2

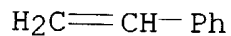
CMF C10 H10 O2



CM 3

CRN 100-42-5

CMF C8 H8

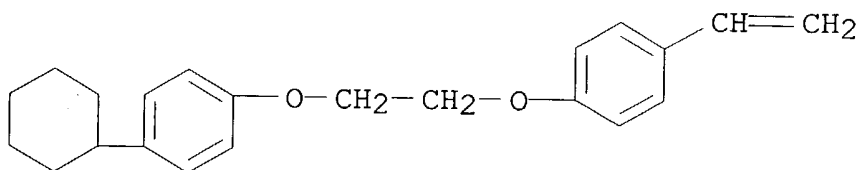


RN 675836-60-9 HCA

CN Phenol, 4-ethenyl-, polymer with 1-cyclohexyl-4-[2-(4-ethenylphenoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

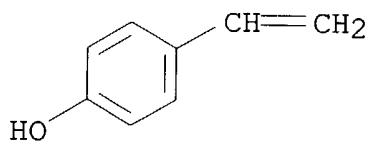
CM 1

CRN 675836-59-6
CMF C22 H26 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-20; G21K005-00; G03F007-30
NCL 430270100; 430296000; 430311000; 378034000; 430325000; 430326000;
430921000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
ST **resist** compn photoacid generator
IT **Resists**
(neg.-working; **resist** compn.)
IT **144767-83-9p**
(acid generator; **resist** compn. contg.)
IT 66003-78-9 111281-12-0 144317-44-2 153698-46-5 193345-23-2
195072-48-1 197447-16-8 258341-98-9 338445-29-7 338445-31-1
389859-76-1 **641638-14-4 641638-15-5**
641638-16-6 641638-17-7 641638-26-8
641638-27-9 641638-32-6 672326-93-1
672326-95-3
(acid generator; **resist** compn. contg.)
IT **24979-69-9 24979-70-2 24979-73-5**
24979-74-6 129674-22-2 135648-85-0
149614-53-9 158593-28-3 159296-87-4
171429-59-7 177034-75-2 185405-14-5
200808-68-0 204065-67-8 219838-71-8
279244-37-0 288620-13-3 321164-59-4

345212-27-3 345212-56-8 345212-59-1
 349619-68-7 354589-43-8 372968-15-5
 396098-38-7 575464-71-0 675836-60-9

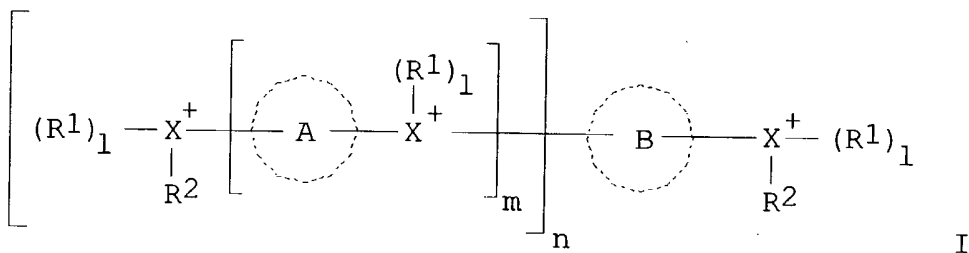
(alkali-sol. resin; **resist** compn. contg.)

IT 536-80-1, Iodosylbenzene 1493-13-6, Trifluoromethanesulfonic acid
 (prepn. of acid generator for **resist** compn.)

L44 ANSWER 3 OF 4 HCA COPYRIGHT 2004 ACS on STN

140:84637 **Resist** composition. Takahashi, Hyou; Yasunami,
 Shoichiro; Mizutani, Kazuyoshi (Fuji Photo Film Co., Ltd., Japan).
 U.S. Pat. Appl. Publ. US 2004005513 A1 20040108, 47 pp. (English).
 CODEN: USXXCO. APPLICATION: US 2003-606845 20030627. PRIORITY: JP
 2002-190581 20020628.

GI



AB The **resist** compn. of the present invention, ensuring
 excellent pattern profile and excellent isolation performance for
 use in the pattern formation by the irradiation of actinic rays or
 radiation, particularly, electron beam, X ray or EUV light, which
 comprising (A) a compd. having a specific partial structure
 represented by I [X = sulfur atom, iodine atom; R¹, R² = alkyl,
 aryl; A, B = hydrocarbon structure; l = 0, 1; m = 0-10; n = 1-5] and
 a counter ion, the compd. generating an acid upon irradiation of actinic
 rays or radiation, (B) an alkali-sol. resin, and (C) a crosslinking
 agent of undergoing an addition reaction with the alkali-sol. resin.

IT 326591-96-2P

(acid decomposable resin; **resist** compn. showing
 excellent pattern profile and isolation performance)

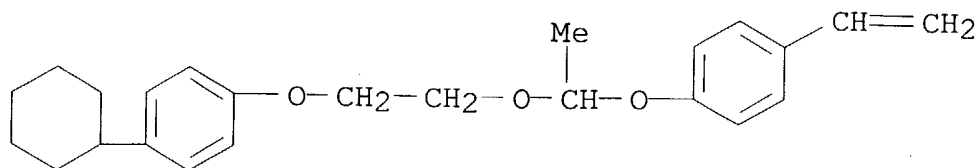
RN 326591-96-2 HCA

CN Phenol, 4-ethenyl-, polymer with 1-cyclohexyl-4-[2-[1-(4-
 ethenylphenoxy)ethoxy]ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 326591-95-1

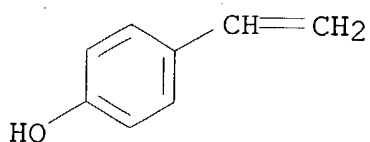
CMF C24 H30 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



IT 129674-22-2 158593-28-3 159296-87-4

177034-75-2 200808-68-0 279244-37-0

288620-13-3 372968-15-5 610301-50-3

(acid decomposable resin; **resist** compn. showing
excellent pattern profile and isolation performance)

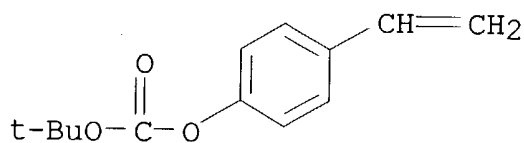
RN 129674-22-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 87188-51-0

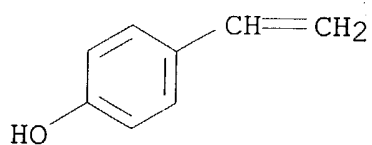
CMF C13 H16 O3



CM 2

CRN 2628-17-3

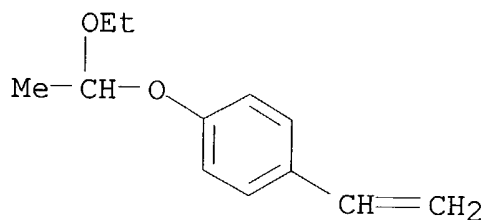
CMF C8 H8 O



RN 158593-28-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
 (9CI) (CA INDEX NAME)

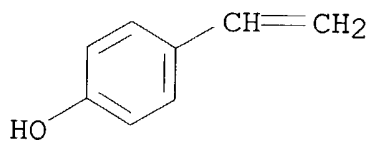
CM 1

CRN 157057-20-0
 CMF C12 H16 O2



CM 2

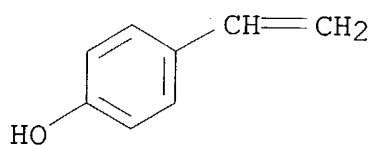
CRN 2628-17-3
 CMF C8 H8 O



RN 159296-87-4 HCA
 CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

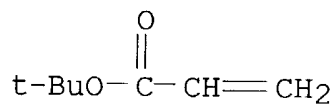
CRN 2628-17-3
 CMF C8 H8 O



CM 2

CRN 1663-39-4

CMF C7 H12 O2



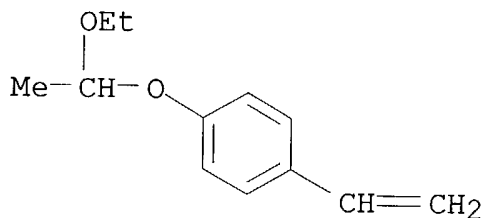
RN 177034-75-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with
1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 157057-20-0

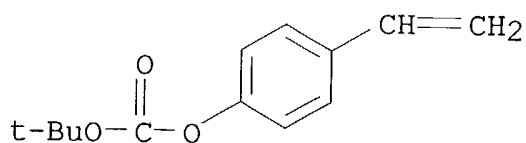
CMF C12 H16 O2



CM 2

CRN 87188-51-0

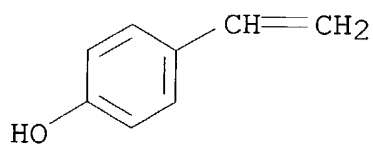
CMF C13 H16 O3



CM 3

CRN 2628-17-3

CMF C8 H8 O



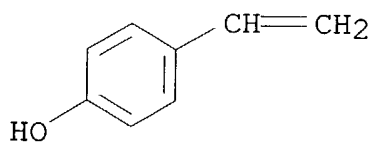
RN 200808-68-0 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

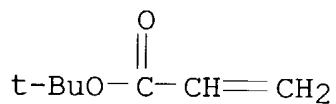
CMF C8 H8 O



CM 2

CRN 1663-39-4

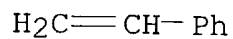
CMF C7 H12 O2



CM 3

CRN 100-42-5

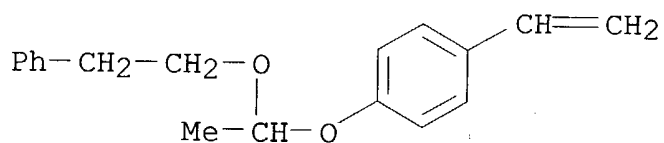
CMF C8 H8



RN 279244-37-0 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

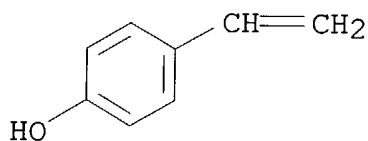
CM 1

CRN 246157-37-9
 CMF C18 H20 O2



CM 2

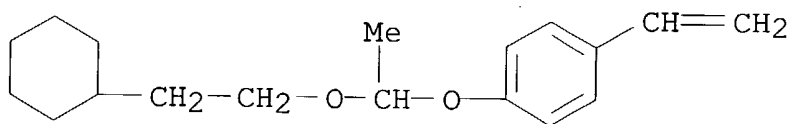
CRN 2628-17-3
 CMF C8 H8 O



RN 288620-13-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

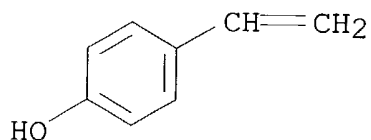
CM 1

CRN 288620-12-2
 CMF C18 H26 O2



CM 2

CRN 2628-17-3
 CMF C8 H8 O



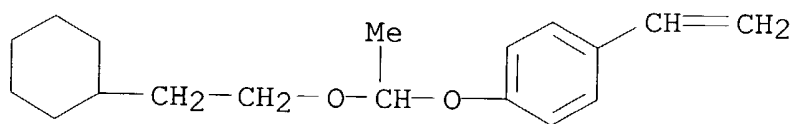
RN 372968-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

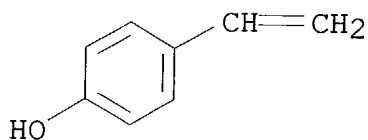
CMF C18 H26 O2



CM 2

CRN 2628-17-3

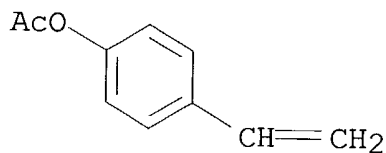
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



RN 610301-50-3 HCA

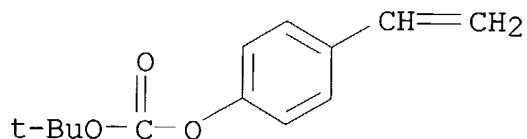
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with

1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

CRN 87188-51-0

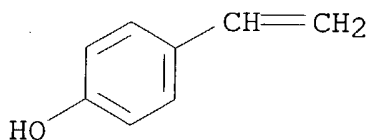
CMF C13 H16 O3



CM 2

CRN 2628-17-3

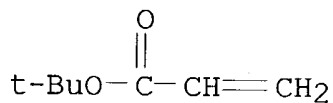
CMF C8 H8 O



CM 3

CRN 1663-39-4

CMF C7 H12 O2



IT 144767-83-9P

(acid generator; **resist** compn. showing excellent
pattern profile and isolation performance)

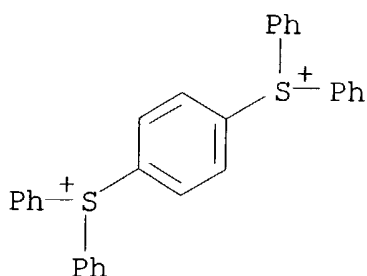
RN 144767-83-9 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

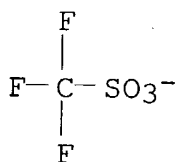
CMF C30 H24 S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IT 100093-00-3 641638-14-4 641638-15-5
 641638-16-6 641638-17-7 641638-19-9
 641638-21-3 641638-23-5 641638-24-6
 641638-26-8 641638-32-6

(acid generator; **resist** compn. showing excellent
 pattern profile and isolation performance)

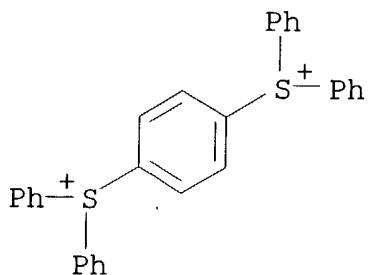
RN 100093-00-3 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, bis[hexafluorophosphate(1-)]
 (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

CMF C30 H24 S2

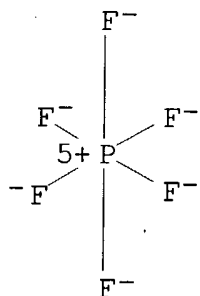


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



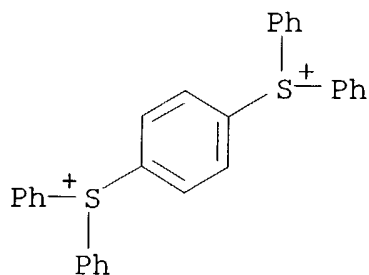
RN 641638-14-4 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
INDEX NAME)

CM 1

CRN 100092-99-7

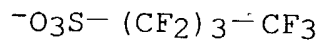
CMF C30 H24 S2



CM 2

CRN 45187-15-3

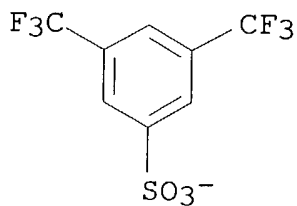
CMF C4 F9 O3 S



RN 641638-15-5 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 3,5-bis(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX
 NAME)

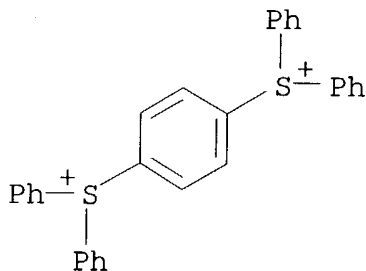
CM 1

CRN 213740-84-2
 CMF C8 H3 F6 O3 S



CM 2

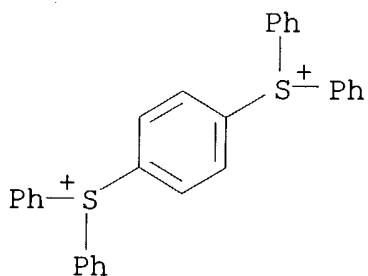
CRN 100092-99-7
 CMF C30 H24 S2



RN 641638-16-6 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

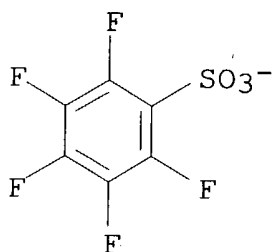
CRN 100092-99-7
 CMF C30 H24 S2



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



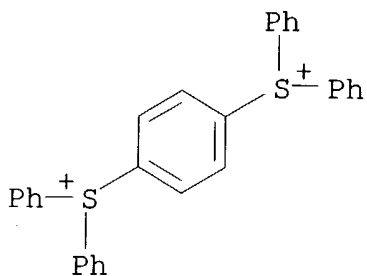
RN 641638-17-7 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 100092-99-7

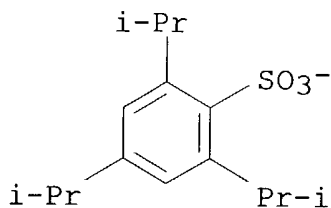
CMF C30 H24 S2



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



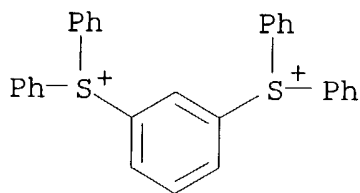
RN 641638-19-9 HCA

CN Sulfonium, 1,3-phenylenebis[diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
INDEX NAME)

CM 1

CRN 641638-18-8

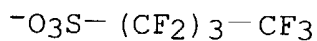
CMF C30 H24 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



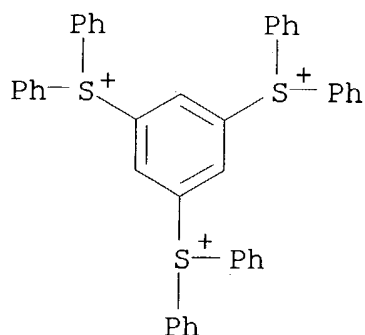
RN 641638-21-3 HCA

CN Sulfonium, 1,3,5-benzenetriyltris[diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:3) (9CI) (CA
INDEX NAME)

CM 1

CRN 641638-20-2

CMF C42 H33 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S

 $^{-}O_3S^{-}(CF_2)_3-CF_3$

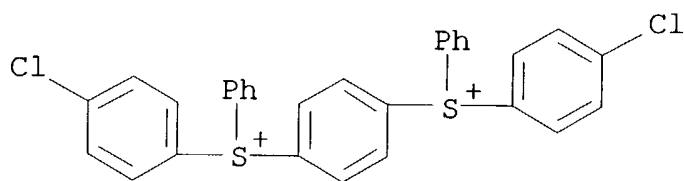
RN 641638-23-5 HCA

CN Sulfonium, 1,4-phenylenebis[(4-chlorophenyl)phenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
INDEX NAME)

CM 1

CRN 641638-22-4

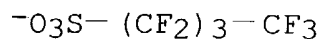
CMF C30 H22 Cl2 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



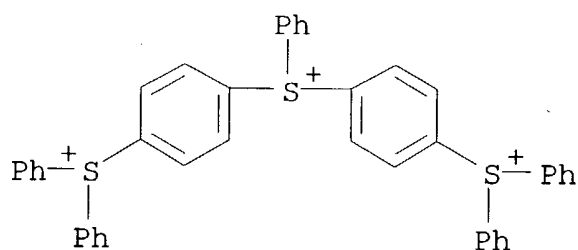
RN 641638-24-6 HCA

CN Sulfonium, bis[4-(diphenylsulfonio)phenyl]phenyl-, salt with 2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 100093-01-4

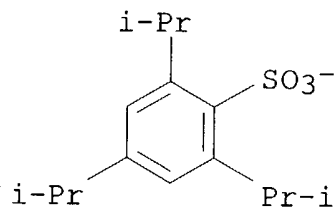
CMF C42 H33 S3



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



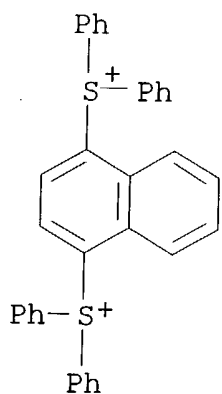
RN 641638-26-8 HCA

CN Sulfonium, 1,4-naphthalenediylbis[diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butananesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 641638-25-7

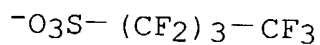
CMF C34 H26 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



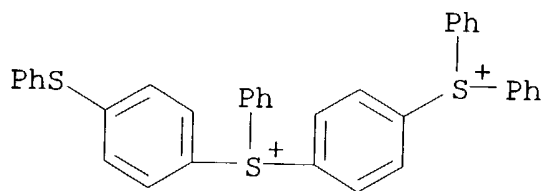
RN 641638-32-6 HCA

CN Sulfonium, diphenyl[4-[phenyl[4-(phenylthio)phenyl]sulfonio]phenyl]-
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2)
 (9CI) (CA INDEX NAME)

CM 1

CRN 641638-31-5

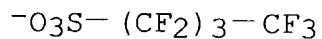
CMF C36 H28 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



IT 24979-69-9 24979-70-2 24979-73-5
24979-74-6 149614-53-9 171429-59-7
185405-14-5 204065-67-8 321164-59-4
345212-27-3 345212-59-1 349619-68-7
396098-38-7 473313-52-9 575464-71-0
(alkali-sol. resin; **resist** compn. showing excellent
pattern profile and isolation performance)

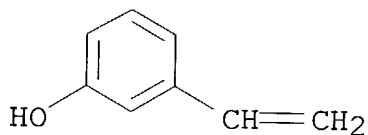
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



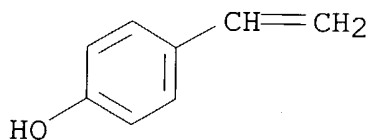
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



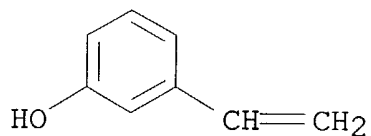
RN 24979-73-5 HCA

CN Phenol, 3-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

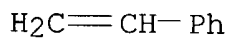
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



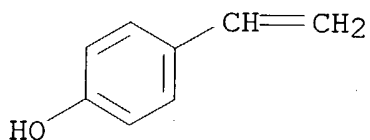
RN 24979-74-6 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

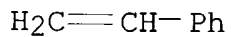
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



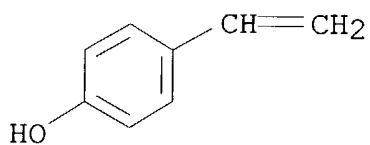
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

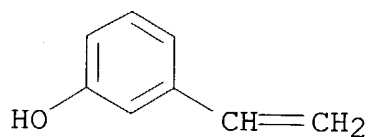
CMF C8 H8 O



CM 2

CRN 620-18-8

CMF C8 H8 O



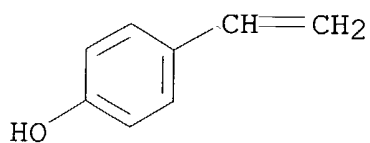
RN 171429-59-7 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

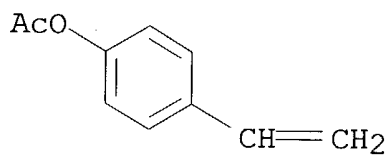
CMF C8 H8 O



CM 2

CRN 2628-16-2

CMF C10 H10 O2



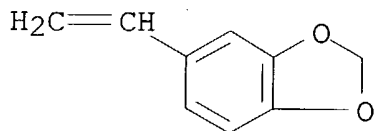
RN 185405-14-5 HCA

CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,3-benzodioxole (9CI)
(CA INDEX NAME)

CM 1

CRN 7315-32-4

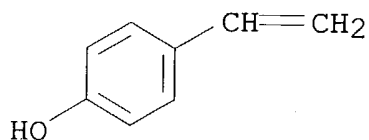
CMF C9 H8 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



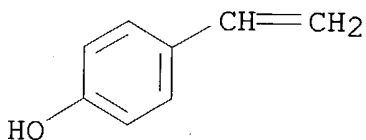
RN 204065-67-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-methylbenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 2628-17-3

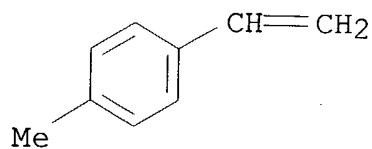
CMF C8 H8 O



CM 2

CRN 622-97-9

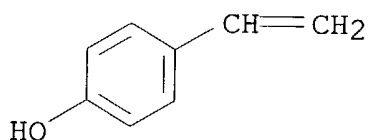
CMF C9 H10



RN 321164-59-4 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

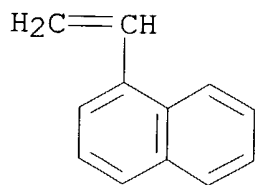
CM 1

CRN 2628-17-3
 CMF C8 H8 O



CM 2

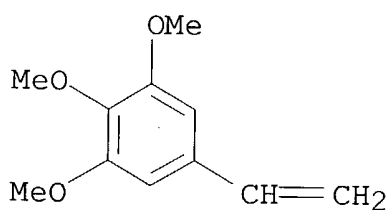
CRN 826-74-4
 CMF C12 H10



RN 345212-27-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,2,3-trimethoxybenzene (9CI) (CA INDEX NAME)

CM 1

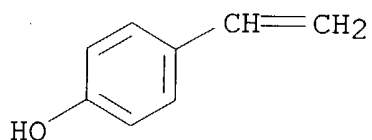
CRN 13400-02-7
 CMF C11 H14 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



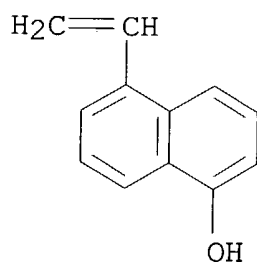
RN 345212-59-1 HCA

CN 1-Naphthalenol, 5-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-58-0

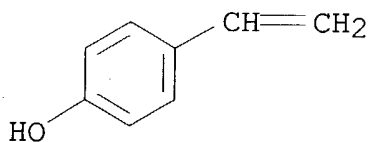
CMF C12 H10 O



CM 2

CRN 2628-17-3

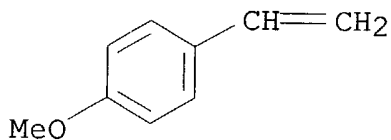
CMF C8 H8 O



RN 349619-68-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI)
(CA INDEX NAME)

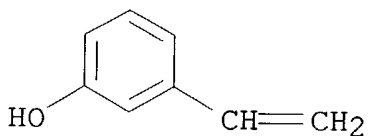
CM 1

CRN 637-69-4
CMF C9 H10 O



CM 2

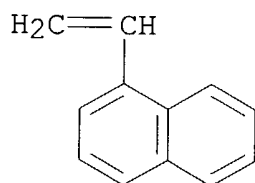
CRN 620-18-8
CMF C8 H8 O



RN 396098-38-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

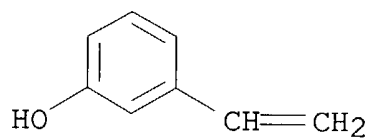
CRN 826-74-4
CMF C12 H10



CM 2

CRN 620-18-8

CMF C8 H8 O



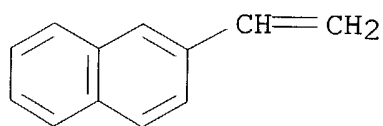
RN 473313-52-9 HCA

CN Phenol, 3-ethenyl-, polymer with 2-ethylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 827-54-3

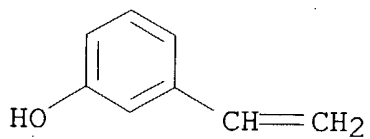
CMF C12 H10



CM 2

CRN 620-18-8

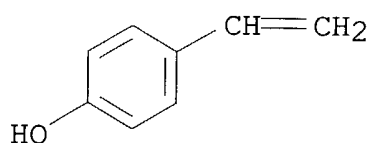
CMF C8 H8 O



RN 575464-71-0 HCA
 CN Phenol, 4-ethenyl-, polymer with ethenylbenzene and 4-ethenylphenyl
 acetate (9CI) (CA INDEX NAME)

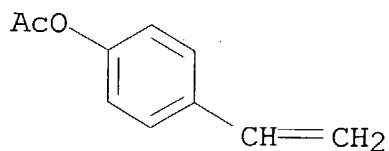
CM 1

CRN 2628-17-3
 CMF C8 H8 O



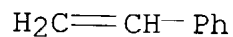
CM 2

CRN 2628-16-2
 CMF C10 H10 O2



CM 3

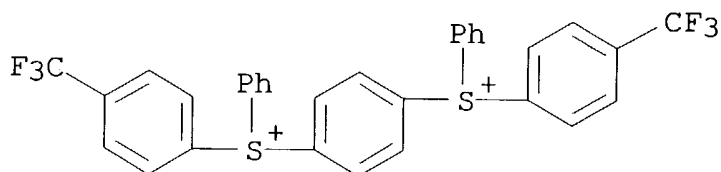
CRN 100-42-5
 CMF C8 H8



IC ICM G03C001-492
 ICS G03C001-494; G03C001-76
 NCL 430270100
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38, 76
 ST **resist** compn acid generator **photoresist** electron
 beam x ray
 IT **Photoresists**
 (UV; **resist** compn. showing excellent pattern profile
 and isolation performance)

- IT Electron beam **resists**
X-ray **resists**
(**resist** compn. showing excellent pattern profile and isolation performance)
- IT 326591-96-2P
(acid decomposable resin; **resist** compn. showing excellent pattern profile and isolation performance)
- IT 129674-22-2 158593-28-3 159296-87-4
177034-75-2 200808-68-0 279244-37-0
288620-13-3 372968-15-5 610301-50-3
(acid decomposable resin; **resist** compn. showing excellent pattern profile and isolation performance)
- IT 144767-83-9P
(acid generator; **resist** compn. showing excellent pattern profile and isolation performance)
- IT 100093-00-3 641638-14-4 641638-15-5
641638-16-6 641638-17-7 641638-19-9
641638-21-3 641638-23-5 641638-24-6
641638-26-8 641638-27-9 641638-28-0 641638-30-4
641638-32-6
(acid generator; **resist** compn. showing excellent pattern profile and isolation performance)
- IT 173786-80-6P, 4-Acetoxystyrene-4-methoxystyrene copolymer
(alkali-sol. resin; **resist** compn. showing excellent pattern profile and isolation performance)
- IT 24979-69-9 24979-70-2 24979-73-5
24979-74-6 149614-53-9 171429-59-7
185405-14-5 204065-67-8 219838-71-8
321164-59-4 345212-27-3 345212-59-1
349619-68-7 354589-43-8 396098-38-7
473313-52-9 575464-71-0
(alkali-sol. resin; **resist** compn. showing excellent pattern profile and isolation performance)
- IT 161679-94-3P 185502-14-1P 185502-15-2P 197087-74-4P
(crosslinking agent for **resist** compn. showing excellent pattern profile and isolation performance)
- IT 3089-11-0
(crosslinking agent for **resist** compn. showing excellent pattern profile and isolation performance)
- IT 102-82-9, Tri-n-butylamine 484-47-9, 2,4,5-Triphenylimidazole
1122-58-3, 4-Dimethylaminopyridine 3001-72-7, 1,5-Diazabicyclo(4.3.0)non-5-ene
(nitrogen-contg. basic compd. for **resist** compn. showing excellent pattern profile and isolation performance)
- IT 71-43-2, Benzene, reactions 139-66-2, Diphenylsulfide 536-80-1,
Iodosyl benzene 1493-13-6, Trifluoromethanesulfonic acid
(prepn. of acid generator for **resist** compn. showing excellent pattern profile and isolation performance)

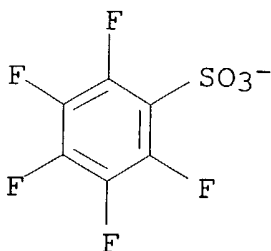
- IT 138996-14-2P
(prepn. of acid generator for **resist** compn. showing excellent pattern profile and isolation performance)
- IT 50-00-0, Formalin, reactions 141-78-6, Ethyl acetate, reactions 110726-28-8, Trisp-PA 161679-95-4 161679-98-7 197087-73-3
(prepn. of crosslinking agent for **resist** compn. showing excellent pattern profile and isolation performance)
- IT 162846-57-3P
(prepn. of crosslinking agent for **resist** compn. showing excellent pattern profile and isolation performance)
- L44 ANSWER 4 OF 4 HCA COPYRIGHT 2004 ACS on STN
- 139:188324 **Resist** composition for electron beam, x-ray or EUV.
Mizutani, Kazuyoshi; Takahashi, Hyou (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1338921A2 20030827, 118 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-2684 20030212. PRIORITY: JP 2002-35685 20020213; JP 2002-38494 20020215.
- AB A **resist** compn. for an electron beam, EUV or X-ray comprises a compd. that has a redn. potential higher than that of di-Ph iodonium salt and generates an acid upon irradiation of an actinic ray or radiation. A **resist** compn. for an electron beam, EUV or X-ray is suitable for use in an ultra-micro lithog process.
- IT 578742-01-5 578742-02-6
(acid generator; **resist** compn. for electron beam, x-ray or EUV lithog.)
- RN 578742-01-5 HCA
- CN Sulfonium, 1,4-phenylenebis[phenyl[4-(trifluoromethyl)phenyl]-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)
- CM 1
- CRN 578742-00-4
- CMF C32 H22 F6 S2



CM 2

CRN 46377-88-2

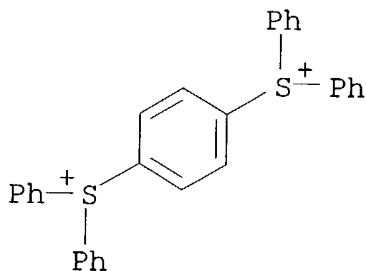
CMF C6 F5 O3 S



RN 578742-02-6 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA
 INDEX NAME)

CM 1

CRN 100092-99-7
 CMF C30 H24 S2



CM 2

CRN 45187-15-3
 CMF C4 F9 O3 S

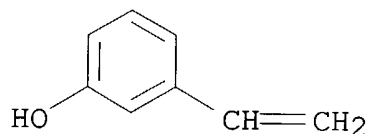
$^{-}\text{O}_3\text{S}^{-}(\text{CF}_2)_3\text{CF}_3$

IT 24979-69-9 24979-70-2 24979-74-6
 158593-28-3 321164-59-4 345212-25-1
 396098-38-7 578742-05-9
 (resin; resist compn. for electron beam, x-ray or EUV
 lithog.)
 RN 24979-69-9 HCA
 CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



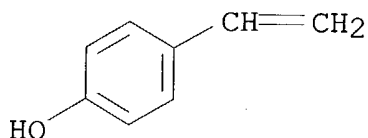
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



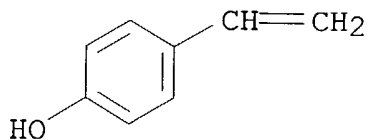
RN 24979-74-6 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

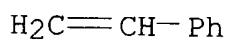
CMF C8 H8 O



CM 2

CRN 100-42-5

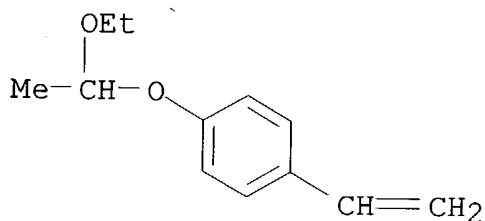
CMF C8 H8



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

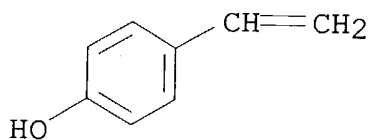
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

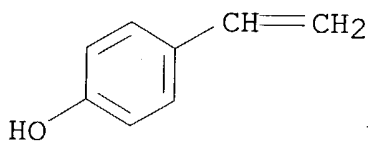
CRN 2628-17-3
CMF C8 H8 O



RN 321164-59-4 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

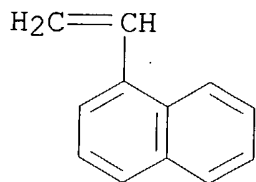
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

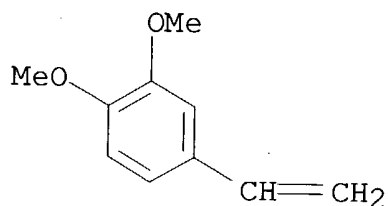
CRN 826-74-4
CMF C12 H10



RN 345212-25-1 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenyl-1,2-dimethoxybenzene
(9CI) (CA INDEX NAME)

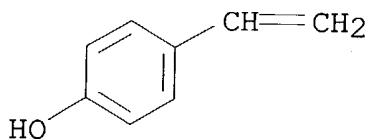
CM 1

CRN 6380-23-0
CMF C10 H12 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O

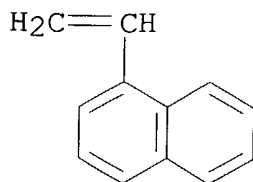


RN 396098-38-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 826-74-4

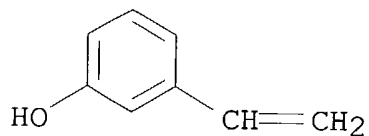
CMF C12 H10



CM 2

CRN 620-18-8

CMF C8 H8 O



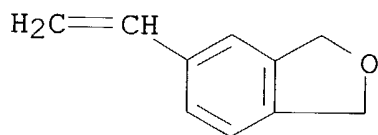
RN 578742-05-9 HCA

CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,3-dihydroisobenzofuran
(9CI) (CA INDEX NAME)

CM 1

CRN 578742-04-8

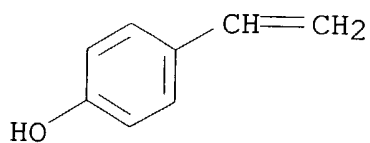
CMF C10 H10 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



IT 125325-82-8 142952-62-3 177984-02-0
177984-04-2

(resin; **resist** compn. for electron beam, x-ray or EUV lithog.)

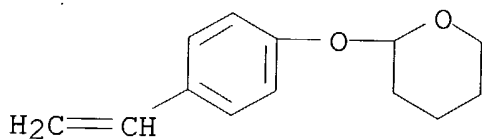
RN 125325-82-8 HCA

CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

CM 1

CRN 65409-15-6

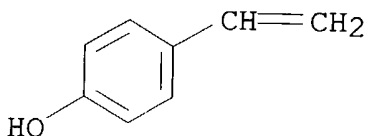
CMF C13 H16 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



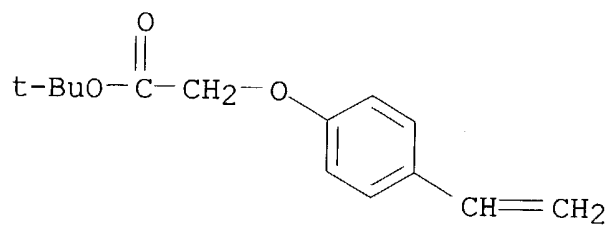
RN 142952-62-3 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

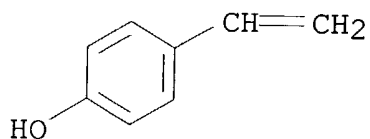
CMF C14 H18 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



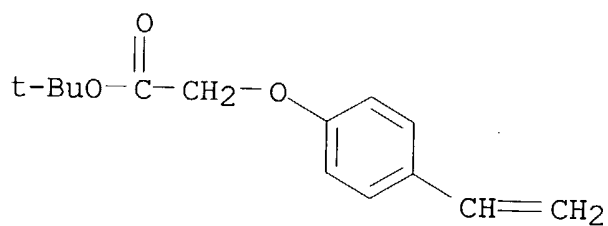
RN 177984-02-0 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with 4-ethenylcyclohexanol and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

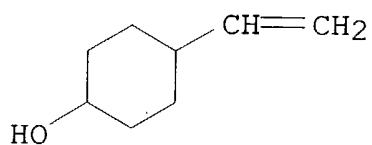
CMF C14 H18 O3



CM 2

CRN 76123-09-6

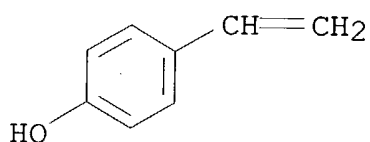
CMF C8 H14 O



CM 3

CRN 2628-17-3

CMF C8 H8 O



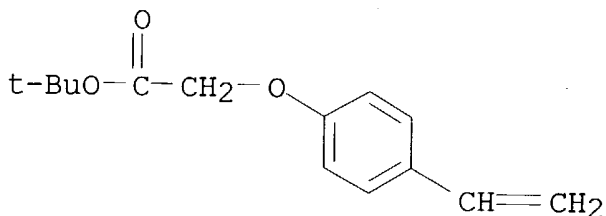
RN 177984-04-2 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer
with 2-butenedinitrile and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

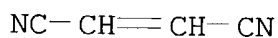
CMF C14 H18 O3



CM 2

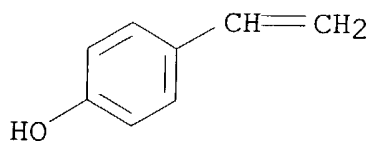
CRN 17656-09-6

CMF C4 H2 N2



CM 3

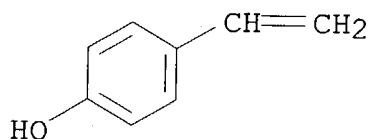
CRN 2628-17-3
CMF C8 H8 O



IT **24979-70-2DP**, Poly(4-hydroxystyrene), partially reaction product with acetic anhydride
(**resist** compn. for electron beam, x-ray or EUV lithog.)
RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-039; G03F007-038
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
ST **resist** compn electron beam x ray
IT **Resists**
(**resist** compn. for electron beam, x-ray or EUV lithog.)
IT Polysiloxanes, uses
(surface active agent; **resist** compn. for electron beam, x-ray or EUV lithog.)
IT 19600-49-8 144317-44-2 270563-93-4 328935-88-2 365971-70-6
476274-42-7 514847-15-5 578741-79-4 578741-80-7 578741-81-8
578741-84-1 578741-86-3 578741-87-4 578741-89-6 578741-91-0
578741-92-1 578741-94-3 578741-95-4 578741-97-6 578741-99-8
578742-01-5 578742-02-6
(acid generator; **resist** compn. for electron beam, x-ray or EUV lithog.)
IT 100-97-0, uses 110-85-0, Piperazine, uses 280-48-8,
1,3-Diazabicyclo[2.2.2]octane 484-47-9, 2,4,5-Triphenylimidazole
1122-58-3, 4-Dimethylaminopyridine 2002-16-6, Phenylguanidine

- 3001-72-7, {1,5-Diazabicyclo[4.3.0]non-5-ene} 24544-04-5,
2,6-Diisopropylaniline 122936-95-2, {1,8-Diazabicyclo[4.3.0]non-5-ene} 578742-06-0
(basic compd.; **resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 161679-94-3P 162846-57-3P 244057-73-6P
(crosslinking agent; **resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 75-59-2, Tetramethylammonium hydroxide 110-75-8, 2-Chloroethyl vinyl ether 123-30-8, p-Aminophenol 132-65-0, Dibenzothiophene 832-53-1, Pentafluorobenzenesulfonyl chloride 1131-60-8, p-Cyclohexylphenol 2049-95-8, tert-Amylbenzene 12027-06-4, Ammonium Iodide 110726-28-8, Trisp-PA 514846-93-6
(prepn. of **resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 3744-08-9P, Triphenylsulfonium iodide 258342-09-5P 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate
(prepn. of **resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 24979-69-9 24979-70-2 24979-74-6
158593-28-3 321164-59-4 345212-25-1
396098-38-7 578742-05-9
(resin; **resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 125325-82-8 142952-62-3 177984-02-0
177984-04-2 578742-03-7
(resin; **resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 108-24-7DP, Acetic anhydride, reaction product with polyhydroxystyrene 24424-99-5DP, Di-tert-Butyl dicarbonate, reaction product with polyhydroxystyrene 24979-70-2DP, Poly(4-hydroxystyrene), partially reaction product with acetic anhydride 24979-70-2DP, VP-8000, reaction product with diBu dicarbonate or cyclohexylphenoxyethyl vinyl ether 160309-96-6DP, p-Acetoxystyrene-tert-butyl methacrylate copolymer, hydrolyzed 173786-80-6DP, 4-Acetoxystyrene-4-methoxystyrene copolymer, hydrolyzed 212555-24-3DP, 4-Cyclohexylphenoxyethyl vinyl ether, reaction product with polyhydroxystyrene 349647-07-0P, Acrylonitrile-2-[(4'-hydroxyphenyl)carbonyloxy]ethyl methacrylate-2-hydroxyethyl acrylate copolymer
(**resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 945-51-7, Diphenyl sulfoxide
(**resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate 258341-98-9P, Di(4-tert-amylphenyl)iodonium pentafluorobenzenesulfonate 578741-78-3P
(**resist** compn. for electron beam, x-ray or EUV lithog.)
- IT 9004-78-8, Polyoxyethylene phenyl ether 137462-24-9, Megafac F176

216679-67-3, Megafac R08
(surface active agent; **resist** compn. for electron beam,
x-ray or EUV lithog.)

=> d 145 1-12 cbib abs hitstr hitind

L45 ANSWER 1 OF 12 HCA COPYRIGHT 2004 ACS on STN

140:278419 Photoesist composition. Takahashi, Hyou; Mizutani,
Kazuyoshi; Shirakawa, Koji; Yasunami, Shoichiro (Fuji Photo Film
Co., Ltd., Japan). U.S. Pat. Appl. Publ. US 2004053160, A1 20040318,
98 pp. (English). CODEN: USXXCO. APPLICATION: US-2003-613044
20030707. PRIORITY: JP 2002-196011 20020704; JP 2002-261345
20020906; JP 2003-85831 20030326.

AB A **resist** compn. comprises: (A) a compd. capable of
generating an active seed upon irradiation with one of an actinic ray
and a radiation, (B) a compd. capable of reacting with the active
seed generated from the compd. (A) and/or performing electron
transfer to generate an active seed different from the active seed
generated from the compd. (A), and (C) a compd. capable of
performing electron transfer from the active seed generated from the
compd. (B) to generate an acid, wherein supposing that the 1/2 wave
of the oxidation potential of the active seed generated from the compd.
(B) is Epa and the 1/2 wave of the reduction potential of the active
seed generated from the compd. (C) is Epc, the relationship: $Epc - Epa > 0$ is satisfied.

IT 641638-14-4 641638-15-5 641638-16-6
641638-17-7 641638-26-8 641638-32-6
672326-93-1 672326-95-3

(acid generator; photoresist compn. contg.)

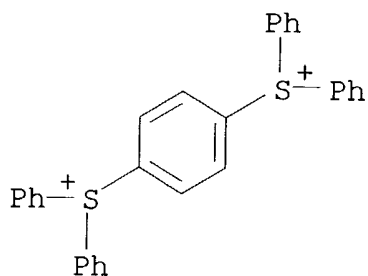
RN 641638-14-4 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluorobutanesulfonic acid (1:2) (9CI) (CA
INDEX NAME)

CM 1

CRN 100092-99-7

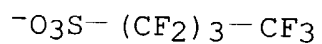
CMF C30 H24 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



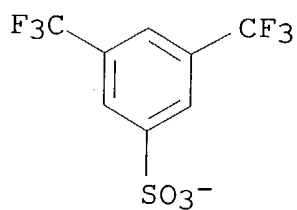
RN 641638-15-5 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
3,5-bis(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 213740-84-2

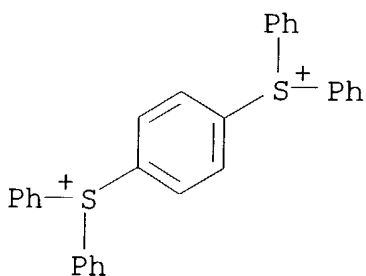
CMF C8 H3 F6 O3 S



CM 2

CRN 100092-99-7

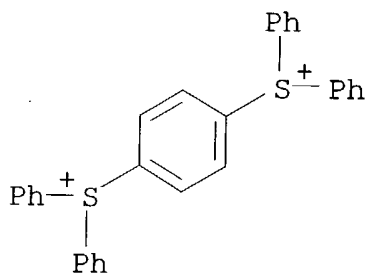
CMF C30 H24 S2



RN 641638-16-6 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
 pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

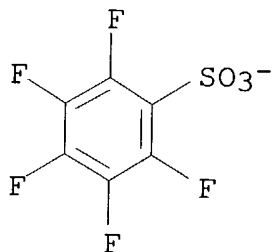
CM 1

CRN 100092-99-7
 CMF C30 H24 S2



CM 2

CRN 46377-88-2
 CMF C6 F5 O3 S



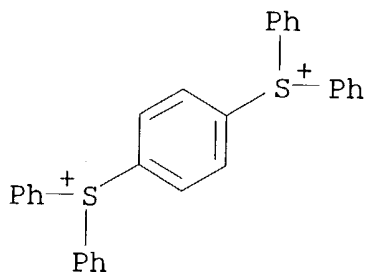
RN 641638-17-7 HCA
 CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with

2,4,6-tris(1-methylethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

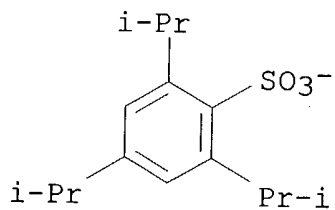
CMF C30 H24 S2



CM 2

CRN 46950-23-6

CMF C15 H23 O3 S



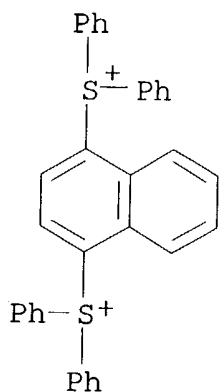
RN 641638-26-8 HCA

CN Sulfonium, 1,4-naphthalenediylbis[diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 641638-25-7

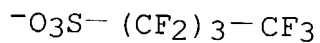
CMF C34 H26 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



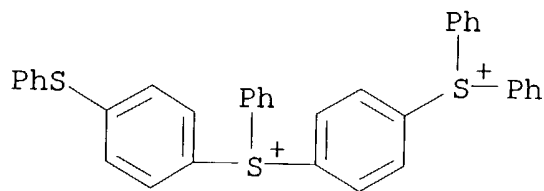
RN 641638-32-6 HCA

CN Sulfonium, diphenyl[4-[phenyl[4-(phenylthio)phenyl]sulfonio]phenyl]-
 , salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2)
 (9CI) (CA INDEX NAME)

CM 1

CRN 641638-31-5

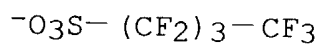
CMF C36 H28 S3



CM 2

CRN 45187-15-3

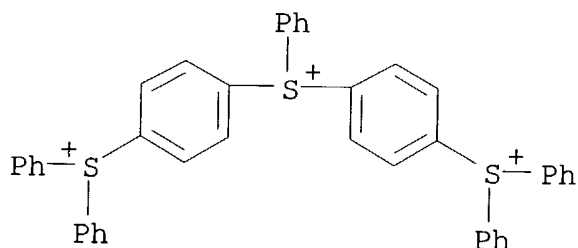
CMF C4 F9 O3 S



RN 672326-93-1 HCA
 CN Sulfonium, bis[4-(diphenylsulfonio)phenyl]phenyl-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA
 INDEX NAME)

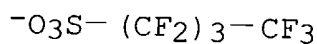
CM 1

CRN 100093-01-4
 CMF C42 H33 S3



CM 2

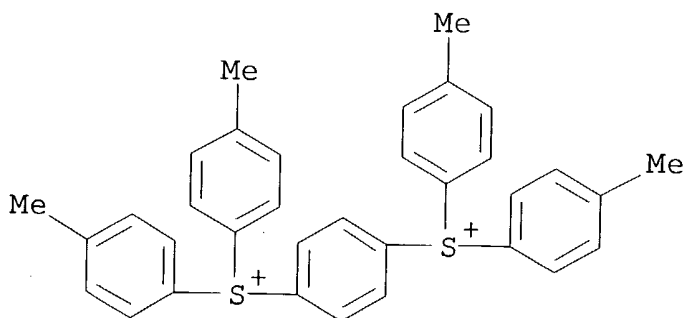
CRN 45187-15-3
 CMF C4 F9 O3 S



RN 672326-95-3 HCA
 CN Sulfonium, 1,4-phenylenebis[bis(4-methylphenyl)-, salt with
 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
 INDEX NAME)

CM 1

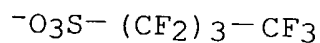
CRN 672326-94-2
 CMF C34 H32 S2



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



IT 144767-83-9P

(prepn. of acid generator for photoresist compn.)

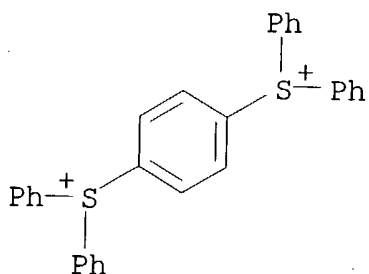
RN 144767-83-9 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with
trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

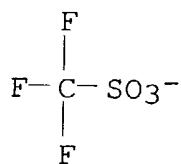
CMF C30 H24 S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



IC ICM G03F007-00
ICS G03F007-004

NCL 430270100; 430914000; 430921000; 430919000; 430925000; 430966000;
430942000; 430927000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

ST **photoresist** compn

IT **Photoresists**
(**photoresist** compn.)

IT 66003-78-9 111281-12-0 129946-88-9 143521-46-4 144317-44-2
177786-98-0 195072-48-1 338445-31-1 578741-79-4 578741-92-1
641638-14-4 641638-15-5 641638-16-6
641638-17-7 641638-26-8 641638-27-9
641638-32-6 672326-86-2 672326-87-3 672326-88-4
672326-89-5 672326-90-8 672326-91-9 672326-92-0
672326-93-1 672326-95-3
(acid generator; **photoresist** compn. contg.)

IT 161679-95-4 185502-14-1 197087-74-4
(crosslinking agent; **photoresist** compn. contg.)

IT 173786-80-6DP, hydrolyzed
(**photoresist** compn. contg.)

IT 764-78-3 2114-42-3 3891-33-6 10581-12-1 17351-75-6
17455-13-9, 1,4,7,10,13,16-Hexaoxacyclooctadecane 19600-49-8
25183-63-5 41440-39-5 58621-56-0 72196-37-3 342809-27-2
359434-76-7 377780-83-1 398141-29-2 398141-30-5 398141-45-2
398141-47-4 672326-74-8 672326-75-9 672326-76-0 672326-77-1
672326-78-2 672326-79-3 672326-81-7 672326-82-8 672326-83-9
672326-84-0 672326-85-1
(**photoresist** compn. contg.)

IT 139-66-2, Diphenyl sulfide 1493-13-6, Trifluoromethane sulfonic
acid
(prepn. of acid generator for **photoresist** compn.)

IT **144767-83-9P**
(prepn. of acid generator for **photoresist** compn.)

IT 110726-28-8, Trisp-PA
(prepn. of crosslinking agent for **photoresist** compn.)

IT 161679-94-3P 162846-57-3P
(prepn. of crosslinking agent for **photoresist** compn.)

140:243668 Antireflective layer of polysiloxane-grafted fluoropolymers, antireflective film provided with the antireflective layer by solvent casting, and its optical imaging device. Kato, Eiichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004069983 A2 20040304, 48 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-228813 20020806.

AB The antireflective layer has a low-refractive index layer formed by application and curing of a film-forming compn. contg. (i) graft copolymers (GP) prepd. by copolyng. .gtoreq.1 monofunctional monomers (A) bearing .gtoreq.1 groups selected from OSiR11R12 and OSiR13R14R15 (R11-R15 = aliph. or arom. group) and .gtoreq.1 monofunctional macromonomers (MM) with Mw .ltoreq.2.0 .times. 104 and involving mer units represented by CF2CFR0f (CFR0f = F, C1-7 perfluoroalkyl, ORf1; ORf1 = C1-22 F-contg. aliph. group) and (ii) hardeners and/or curing accelerators. The optical imaging devices such as CRT, PDP, and LCD has the antireflective film showing high scratch resistance and antisoiling property.

IT 100093-00-3

(antireflective film provided with antireflective layer of polysiloxane-grafted fluoropolymers by solvent casting for displays)

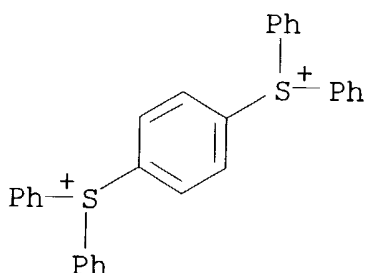
RN 100093-00-3 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

CMF C30 H24 S2

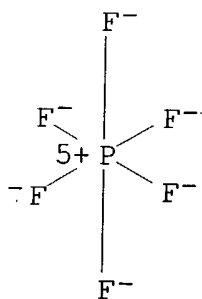


CM 2

CRN 16919-18-9

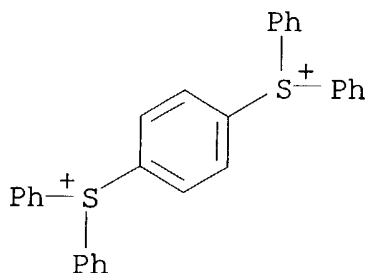
CMF F6 P

CCI CCS



- IC ICM G02B001-11
ICS B32B007-02; B32B027-00; G02F001-1335
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 73
- IT 104-15-4, p-Toluenesulfonic acid, uses 947-19-3 5593-70-4
6175-45-7 10409-07-1 17501-44-9, Zirconium (IV) acetylacetonate
71868-10-5, Irgacure 907 82799-44-8, Kayacure DETX
100093-00-3 667457-34-3 667457-35-4
(antireflective film provided with antireflective layer of polysiloxane-grafted fluoropolymers by solvent casting for displays)
- L45 ANSWER 3 OF 12 HCA COPYRIGHT 2004 ACS on STN
140:50311 Positive **photoresist** composition. Sasaki, Tomoya; Mizutani, Kazuyoshi; Kanna, Shinichi (Fuji Photo Film Co., Ltd., Japan). U.S. Pat. Appl. Publ. US 2003232277 A1 20031218, 68 pp. (English). CODEN: USXXCO. APPLICATION: US-2003-422789 20030425. PRIORITY: JP 2002-126433 20020426; JP 2002-223234 20020731; JP 2002-223386 20020731.
- AB The invention relates to a pos. **resist** compn. comprising:
(A1) a resin contg. at least one type of repeating unit represented by the specific formula and addnl. contg. at least one type of repeating unit represented by the specific formula, which increases the soly. in an alkali developing soln. by the action of an acid, and (B) a compd. which is capable of generating an acid by the action of actinic ray or radiation. The compn. shows good transparency towards .ltoreq.160 nm light.
- IT 578742-02-6P
(acid generator; pos. **photoresist** compn.)
- RN 578742-02-6 HCA
- CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)
- CM 1

CRN 100092-99-7
CMF C30 H24 S2



CM 2

CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

IC ICM G03F007-039
ICS G03F007-038
NCL 430270100; 430287100; 430176000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST pos **photoresist** compn
IT Positive **photoresists**
(pos. **photoresist** compn.)
IT 375-73-5, Nonafluorobutanesulfonic acid 3744-08-9,
Triphenylsulfonium iodide 27176-87-0, Dodecylbenzenesulfonic acid
(acid generator; pos. **photoresist** compn.)
IT 1511-10-0P 144317-44-2P 205682-99-1P 241806-75-7P
241806-76-8P **578742-02-6P** 634920-85-7P
(acid generator; pos. **photoresist** compn.)
IT 622841-00-3P 622841-03-6P 622841-05-8P 634920-62-0P
634920-65-3P 634920-67-5P 634920-69-7P 634920-72-2P
634920-73-3P 634920-75-5P 634920-76-6P 634920-77-7P
634920-79-9P 634920-80-2P 634920-82-4P 634920-83-5P
634920-87-9P 634920-89-1P 634920-91-5P 634920-93-7P
634920-95-9P 634920-97-1P 634920-98-2P 634921-00-9P
634921-01-0P
(resin; pos. **photoresist** compn.)

L45 ANSWER 4 OF 12 HCA COPYRIGHT 2004 ACS on STN
138:245627 Lithographic printing master plate containing onium salt

radical polymerization initiator. Shimada, Kazuto; Sorori, Tadahiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003076010 A2 20030314, 138 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-266921 20010904.

AB The lithog. printing master plate comprises a heat-mode **photosensitive** layer on a support which contains (A) a light-to-heat conversion agent, (B) a compd. contg. a polymerizable unsatd. group, and (C) an onium salt having .gtoreq.2 cations as a radical polymn. initiator. The exposure wavelength of the heat-mode laser is 760-1,200 nm. The use of the onium salt radical polymn. initiator provides efficient thermal decompn. at a lower temp. and high sensitivity when it is used with a small near-IR laser.

IT **144767-83-9P**

(radical polymn. initiator; prepn. of onium salt radical polymn. initiator for heat-mode lithog. printing master plate)

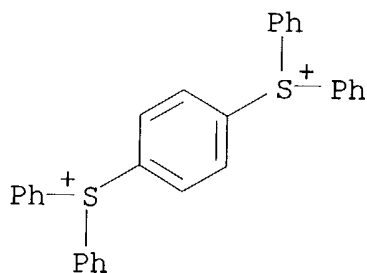
RN 144767-83-9 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

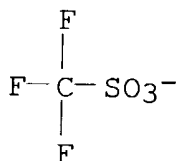
CMF C30 H24 S2



CM 2

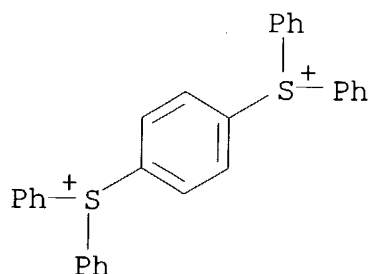
CRN 37181-39-8

CMF C F3 O3 S



IC ICM G03F007-029

- ICS B41N001-14; G03F007-00; G03F007-004; G03F007-027
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 25, 35
IT **144767-83-9p**
(radical polymn. initiator; prepn. of onium salt radical polymn.
initiator for heat-mode lithog. printing master plate)
- L45 ANSWER 5 OF 12 HCA COPYRIGHT 2004 ACS on STN
124:302299 Bilayer **resist** process for exposure with
low-voltage electrons (STM-lithography). Leuschner, R.; Guenther,
E.; Falk, G.; Hammerschmidt, A.; Kragler, K.; Rangelow, I. W.;
Zimmermann, J. (Siemens AG, Zentrale Forschung und Entwicklung, P.O.
Box 3220, Erlangen, 91050, Germany). Microelectronic Engineering,
30(1-4), 447-50 (English) 1996. CODEN: MIENEF. ISSN: 0167-9317.
Publisher: Elsevier.
AB With STM lithog. employing a bilayer-**resist** system, an
electron-sensitive top **resist** and a conductive bottom
resist, it is possible to generate patterns with dimensions
of 100 nm and less. Patterns with aspect ratios up to 8 at a width
of 50 nm in flat silicon oxide surface have been achieved. We also
demonstrate, that it is possible to operate on prepatterned
substrates using a third planarizing **resist** layer. The
exposure mechanism in our CARL top **resist** has been detd.
to work differently from the mechanism in the high electron energy
regime. The low energy electrons directly cleave the tert-Bu ester
group. Chem. amplification was not obsd. The max. writing speed
for complete exposure in the **resist** was 1-5 .mu.m/s at 20
pA writing current.
IT **175848-18-7**
(bilayer **resists** for exposure with low-voltage
electrons contg.)
RN 175848-18-7 HCA
CN Sulfonium, 1,4-phenylenebis[diphenyl-, bis[(OC-6-11)-
hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)
- CM 1
- CRN 100092-99-7
CMF C30 H24 S2

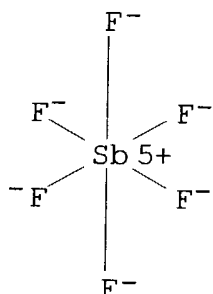


CM 2

CRN 17111-95-4

CMF F6 Sb

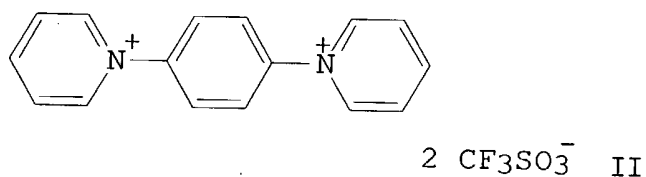
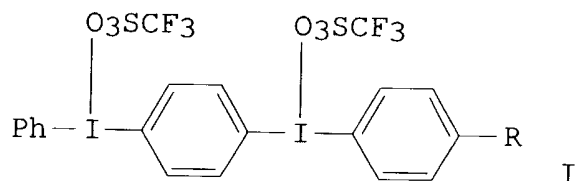
CCI CCS



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST bilayer electron **resist** low voltage
- IT Lithography
(STM; bilayer **resists** for exposure with low-voltage electrons for)
- IT **Resists**
(electron-beam, bilayer; for exposure with low-voltage electrons)
- IT 1886-74-4 7440-44-0, Carbon, uses 7440-44-0D, Carbon, hydrogenated 7631-86-9, Silica, uses 27722-45-8 175610-66-9 175610-67-0 **175848-18-7**
(bilayer **resists** for exposure with low-voltage electrons contg.)
- IT 7429-90-5, Aluminum, uses
(bilayer **resists** for exposure with low-voltage electrons for lithog. of).

their double substitution by some nucleophiles. Kitamura, Tsugio; Furuki, Ryuji; Nagata, Kensuke; Taniguchi, Hiroshi; Stang, Peter J. (Fac. Eng., Kyushu Univ., Fukuoka, 812, Japan). Journal of Organic Chemistry, 57(25), 6810-14 (English) 1992. CODEN: JOCEAH. ISSN: 0022-3263. OTHER SOURCES: CASREACT 118:21999.

GI



AB A reagent prep'd. from a 1:1 M mixt. of PhIO and (CF₃SO₂)₂O or from a 1:2 M mixt. of PhIO and CF₃SO₃H shows high reactivity toward arom. substrates and gives (p-phenylene)bis(aryliodonium) ditriflates, e.g., I [R = H, Me, Me₃C, MeCH₂, NCCH₂, Cl, Br, Me(CH₂)₁₂]. Interaction of the reagent [PhIO-(CF₃SO₂)₂O] with cyclohexene suggests that it has a p-[phenyl[(trifluoromethanesulfonyl)oxy]iodo] phenyliodine(III) structure. Reactions of (p-phenylene)bis(aryliodonium) ditriflates with pyridine, triphenylphosphine, or di-Ph sulfide give double para-substituted benzene derivs. II and 1,4-(X⁺)C₆H₄ 2CF₃SO₃⁻ (X = Ph₃P, Ph₂S) in good to high yields.

IT 144767-83-9P

(prepn. of)

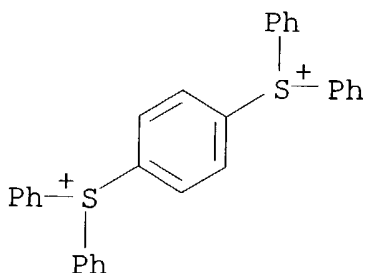
RN 144767-83-9 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

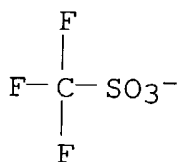
CMF C30 H24 S2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



CC 25-22 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 IT 91146-10-0P 138996-15-3P 144767-79-3P 144767-81-7P
 144767-82-8P **144767-83-9P** 144767-84-0P 144767-85-1P
 144767-86-2P 144767-87-3P 144767-88-4P 144767-89-5P
 144790-47-6P 144790-48-7P 144930-55-2P
 (prepn. of)

L45 ANSWER 7 OF 12 HCA COPYRIGHT 2004 ACS on STN

117:221902 Electrochemical reactions of heteroorganic compounds.
 Kargin, Yu. M.; Zhuikov, V. V.; Budnikova, Yu. G.; Fattakhova, D. S.
 (Kazan. Gos. Univ., Kazan, Russia). Elektrokimiya, 28(4), 615-28
 (Russian) 1992. CODEN: ELKKAX. ISSN: 0424-8570.

AB Processes are described of intermediates of heteroorg. compds.
 during fragmentation of ion radicals (with bond cleavage) and
 disproportionation and dimerization of cation radicals. Special
 attention is paid to reaction of Si- and P-contg. compds. The
 electrochem. is described. Cation radicals with lower electron d.
 were characterized by the 2nd order reactions.

IT **36781-41-6P**
 (formation of, in electrochem. reaction of di-Ph sulfide in
 presence of org. additives)

RN 36781-41-6 HCA

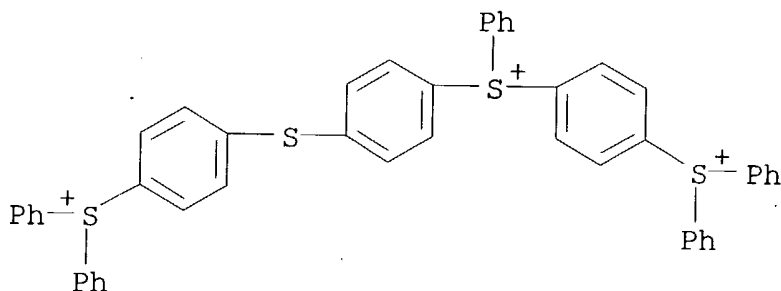
CN Sulfonium, [4-(diphenylsulfonio)phenyl][4-[[4-
 (diphenylsulfonio)phenyl]thio]phenyl]phenyl-, triperchlorate (9CI)

(CA INDEX NAME)

CM 1

CRN 47883-86-3

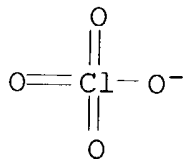
CMF C48 H37 S4



CM 2

CRN 14797-73-0

CMF Cl O4



CC 72-2 (Electrochemistry)

Section cross-reference(s): 22, 29

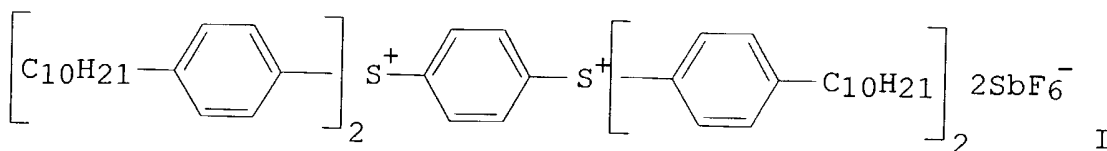
IT **36781-41-6P** 92639-75-3P 92639-76-4P

(formation of, in electrochem. reaction of di-Ph sulfide in presence of org. additives)

L45 ANSWER 8 OF 12 HCA COPYRIGHT 2004 ACS on STN

104:208910 **Photocurable** epoxy resins. Hayase, Shuji; Takato, Takaki; Suzuki, Shuichi (Toshiba Corp., Japan). Jpn. Kokai Tokkyo Koho JP 60203629 A2. 19851015 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1984-59317 19840329.

GI



AB The title compns., which cure rapidly to transparent resins, contain arom. polysulfonium salts. Thus, a mixt. of Epikote 828 (epoxy equiv. 190-210) 80, Epikote 1001 (epoxy equiv. 450-525; mol. wt. 900) 20, and p-C₆H₄[S(C₆H₄C₁₀H₂₁-p)₂⁺ SbF₆⁻]₂ 3 parts was coated on Al and cured by 20 s UV irradiation (80 W/cm²) to give a 20-μm coating with 90% peel resistance (JIS K-5400-6-14) and 2H pencil hardness.

IT 102281-74-3

(catalysts, for photochem. crosslinking of epoxy resins)

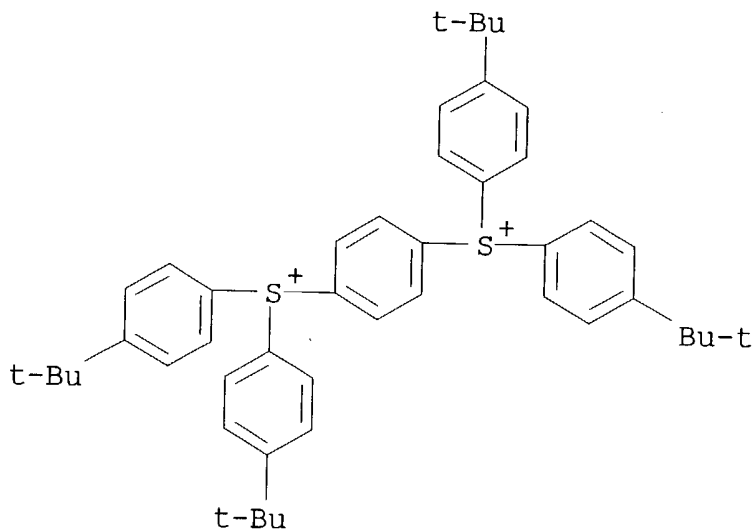
RN 102281-74-3 HCA

CN Sulfonium, 1,4-phenylenebis[bis[4-(1,1-dimethylethyl)phenyl]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 102197-34-2

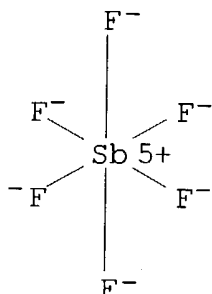
CMF C46 H56 S2



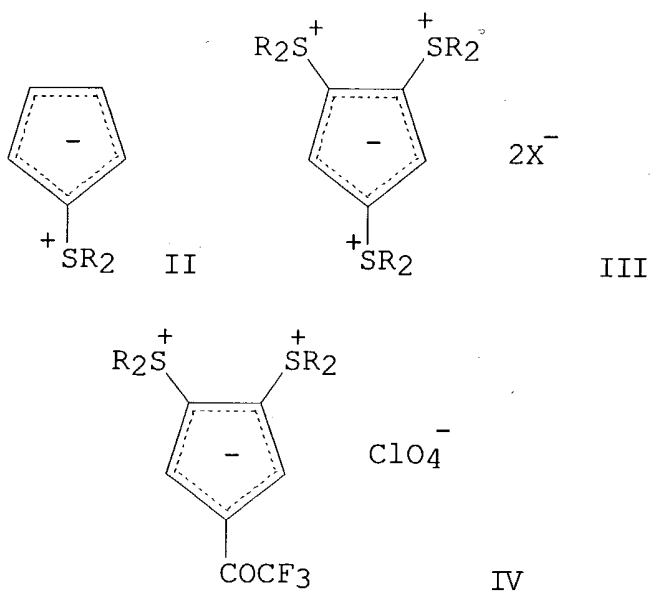
CM 2

CRN 17111-95-4

CMF F6 Sb
CCI CCS



- IC ICM C08G059-68
ICS C08G059-18
- CC 42-9 (Coatings, Inks, and Related Products)
Section cross-reference(s): 37
- ST **photocurable** coating epoxy resin; sulfonium salt catalyst
photocuring; crosslinking photochem epoxy catalyst
- IT Epoxy resins, uses and miscellaneous
(**photocurable**, contg. sulfonium salts)
- IT Coating materials
(**UV-curable**, epoxy resin contg. sulfonium salts as)
- IT **102281-74-3**
(catalysts, for photochem. crosslinking of epoxy resins)
- IT 25068-38-6
(coatings, contg. sulfonium salts, **photocurable**)
- L45 ANSWER 9 OF 12 HCA COPYRIGHT 2004 ACS on STN
104:88153 Monosulfonio- and trissulfoniocyclopentadienides. Hartke, Klaus; Morick, Wolfgang (Inst. Pharm. Chem., Univ. Marburg, Marburg/Lahn, D-3550, Fed. Rep. Ger.). Chemische Berichte, 118(12), 4821-9 (German) 1985. CODEN: CHBEAM. ISSN: 0009-2940. OTHER SOURCES: CASREACT 104:88153.
- GI



AB (Trimethylsilyl)cyclopentadiene (I) and 5,5-bis(trimethylsilyl)cyclopentadiene react with aliph. and cycloaliph. sulfoxides to form the monosulfoniocyclopentadienides II [R = Me, R₂ = (CH₂)₄, (CH₂)₅, CH₂CH₂OCH₂]; in the presence of (F₃CCO)₂O or SOCl₂ the trissulfoniocyclopentadienides III (X = F₃CCO₂, Cl, ClO₄) are obtained. Me₂SO and tetramethylene sulfoxide also condense with cyclopentadiene/(F₃CCO)₂O directly to yield III [R = Me, = (CH₂)₄; X = ClO₄]. In the reaction of I with di-p-tolyl sulfoxide/(F₃CCO)₂O the bissulfoniocyclopentadienide IV (R = p-MeC₆H₄) isolated.

IT 100502-93-0P

(prepn. of)

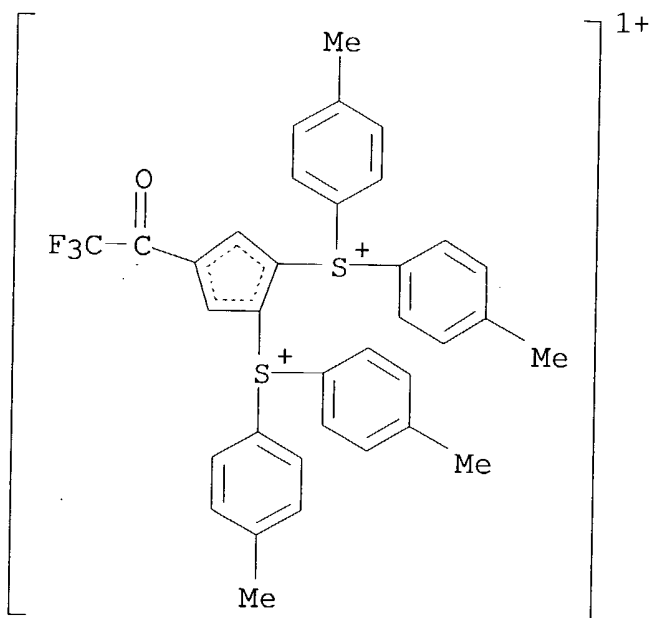
RN 100502-93-0 HCA

CN Sulfonium, bis(4-methylphenyl)-, 2-[bis(4-methylphenyl)sulfonio]-4-(trifluoroacetyl)cyclopentadienylide perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 100502-92-9

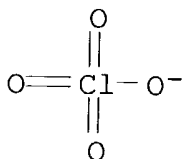
CMF C35 H30 F3 O S2



CM 2

CRN 14797-73-0

CMF Cl 04



CC 24-4 (Alicyclic Compounds)

IT 63854-52-4P 63854-54-6P 96226-35-6P 96226-37-8P 96226-39-0P
 100502-88-3P 100502-89-4P 100502-91-8P **100502-93-0P**
 (prepn. of)

L45 ANSWER 10 OF 12 HCA COPYRIGHT 2004 ACS on STN

104:51175 The synthesis and characterization of cationic photoinitiators bearing two and three photoactive triarylsulfonium groups in the same molecule. Crivello, J. V.; Conlon, D. A.; Lee, J. L. (Gen. Electr. Corp. Res. Dev. Cent., NY, 12301, USA). Polymer Bulletin (Berlin, Germany), 14(3-4), 279-86 (English) 1985. CODEN: POBUDR. ISSN: 0170-0839.

AB A series of photoinitiators for cationic polymn. were prepd. which

bear 2 and 3 photoactive triarylsulfonium groups in the same mol. These compds. were fully characterized by means of their UV and ^{13}C -NMR spectra and liq. chromatog., as well as by their elemental analyses. The multifunctional triarylsulfonium salts were compared among themselves and against monofunctional triarylsulfonium salts in the photoinitiated cationic polymn. of dl-limonene dioxide.

IT 100093-00-3P 100093-02-5P

(prepn. of, as catalyst for polymn. of limonene dioxide)

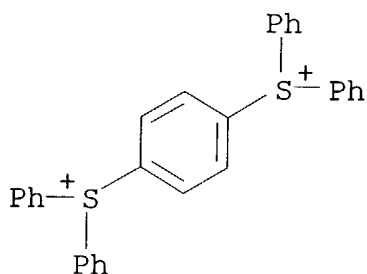
RN 100093-00-3 HCA

CN Sulfonium, 1,4-phenylenebis[diphenyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 100092-99-7

CMF C30 H24 S2

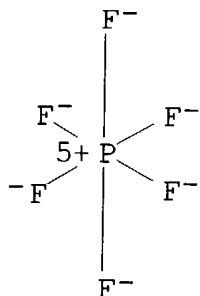


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



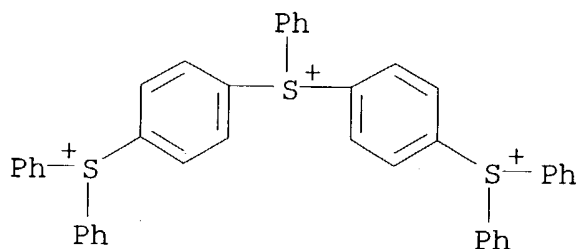
RN 100093-02-5 HCA

CN Sulfonium, bis[4-(diphenylsulfonio)phenyl]phenyl-, tris[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 100093-01-4

CMF C42 H33 S3

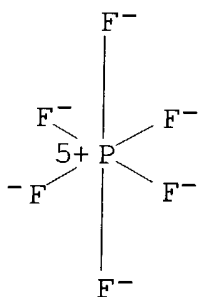


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 35-3 (Chemistry of Synthetic High Polymers)

IT 74227-35-3P 100073-97-0P 100093-00-3P

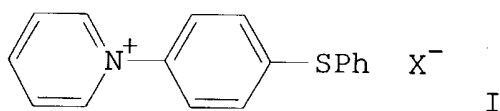
100093-02-5P

(prepn. of, as catalyst for polymn. of limonene dioxide)

L45 ANSWER 11 OF 12 HCA COPYRIGHT 2004 ACS on STN

101:190876 Electrochemical reactions of sulfur-, selenium-, and tellurium-containing organic compounds. XIII. Oxidation of diphenyl sulfide. Latypova, V. Z.; Yakovleva, O. G.; Zhuikov, V. V.; Khusaenov, N. M.; Chichirov, A. A.; Kargin, Yu. M.; Il'yasov, A. V.; Ismaev, I. E. (Kazan. Univ., Kazan, USSR). Zhurnal Obshchei Khimii, 54(5), 1085-9 (Russian) 1984. CODEN: ZOKHA4. ISSN: 0044-460X.

GI



AB The electrochem. oxidn. of Ph₂S in MeCN-NaClO₄ produced the cation radical, which disproportionated to form the dication; the latter reacted with certain nucleophiles. When pyridine was present, pyridinium salts I (X = ClO₄, BF₄) could be obtained.

IT **36781-41-6P**

(prepn. of)

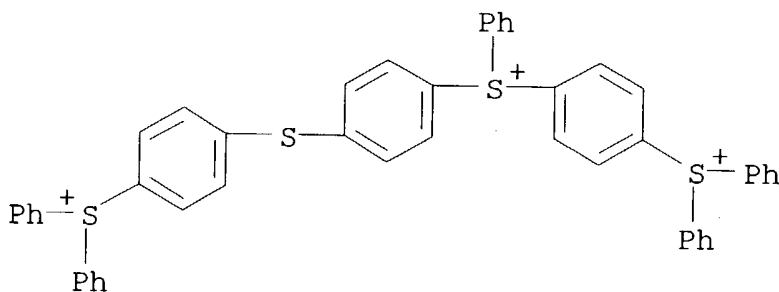
RN 36781-41-6 HCA

CN Sulfonium, [4-(diphenylsulfonio)phenyl][4-[[4-(diphenylsulfonio)phenyl]thio]phenyl]phenyl-, triperchlorate (9CI)
(CA INDEX NAME)

CM 1

CRN 47883-86-3

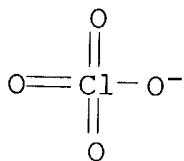
CMF C48 H37 S4



CM 2

CRN 14797-73-0

CMF Cl O4



CC 22-7 (Physical Organic Chemistry)

Section cross-reference(s): 72

IT 32958-90-0P **36781-41-6P** 92639-75-3P 92639-76-4P
(prepn. of)

L45 ANSWER 12 OF 12 HCA COPYRIGHT 2004 ACS on STN

77:42395 Electrochemical behavior of diphenyl sulfide in acetonitrile medium at a platinum electrode. Magno, Franco; Bontempelli, Gino (Ist. Chim. Anal., Univ. Studi Padova, Padua, Italy). Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 36(2), 389-97 (English) 1972. CODEN: JEIEBC. ISSN: 0022-0728.

AB Cyclic voltammetry of Ph₂S at a Pt electrode in MeCN showed 3 oxidn. waves (.apprx. + 1.0, 1.2, and 1.45 V vs. an Ag/Ag⁺ ref. electrode) and a wave for the redn. of H⁺ at .apprx.-0.25 V. Controlled-potential coulometry and acid-base titrn. of the product showed the electrons and H⁺ formed per mol. of Ph₂S were 0.97, 0.48; 1.50, 0.75; and 1.98, 1.27 for each of the oxidn. peaks. Large-scale electrolysis in the dark at -10.degree. permitted extn. and purification of anode products for the 1st 2 peaks. The products were identified by spectra and elemental anal. as diphenylphenylthiophenylsulfonium perchlorate and its dimer, resp. The product of the 3rd oxidn. peak was too unstable for isolation, but a sulfoxide was postulated, the O coming from traces of H₂O or decompn. of HClO₄.

IT **36781-41-6**
(in voltammetry of phenyl sulfite)

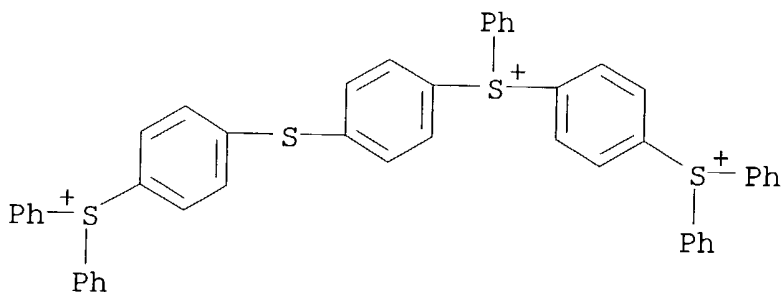
RN 36781-41-6 HCA

CN Sulfonium, [4-(diphenylsulfonio)phenyl][4-[[4-(diphenylsulfonio)phenyl]thio]phenyl]phenyl-, triperchlorate (9CI)
(CA INDEX NAME)

CM 1

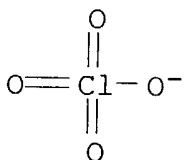
CRN 47883-86-3

CMF C48 H37 S4



CM 2

CRN 14797-73-0
CMF Cl 04

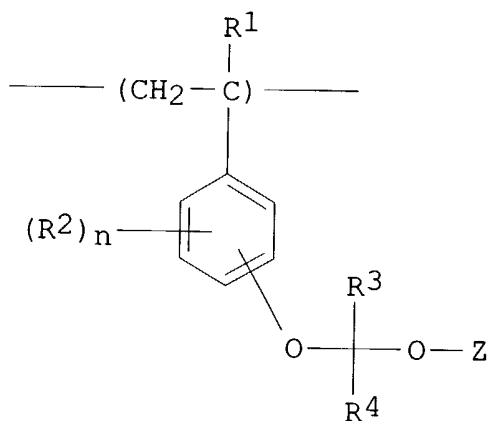


CC 77-11 (Electrochemistry)
IT 32958-90-0 **36781-41-6**
(in voltammetry of phenyl sulfite)

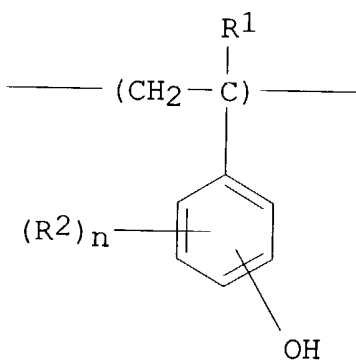
=> d 146 1-23 cbib abs hitstr hitind

L46 ANSWER 1 OF 23 HCA COPYRIGHT 2004 ACS on STN
141:268545 Positive working **resist** composition. Yasunami,
Shoichiro; Shirakawa, Koji; Mizutani, Kazuyoshi (Fuji Photo Film
Co., Ltd., Japan). U.S. Pat. Appl. Publ. US 2004175654 A1 20040909,
37 pp. (English). CODEN: USXXCO. APPLICATION: US 2004-791559
20040303. PRIORITY: JP 2003-58732 20030305.

GI



I



II

AB A pos. working **resist** compn. comprising (A) a resin contg.

repeating units represented by the formula I and II ($R_1 = H, Me, cyano, halogen, C1-4-perfluoroalkyl$; $R_2 = H, alkyl, halogen, aryl, alkoxy, acyl$; R_3 and $R_4 = H, C1-4-alkyl$; $Z = C6-30-hydrocarbon$ contg. at least one cyclic structural unit selected from an alicyclic structure, an arom. cyclic structure and a bridged alicyclic structure; $n = 0-4$), and having a property of being insol. or sparingly sol. in an alkali developing soln. and becoming sol. in an alkali developing soln. by the action of an acid, and (B) a compd. capable of generating sulfonic acid upon irradiation with active rays or radiations in an amt. of 5-20% by wt. based on the total solid content of the pos. working **resist** compn. The object of the invention is to provide a pos. working **resist** compn. capable of satisfying high sensitivity, high resolu., good pattern shape and good line edge roughness at the same time.

IT 270563-96-7

(basic compd.; pos. working **resist** compn.)

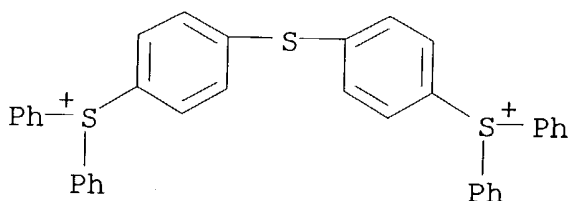
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

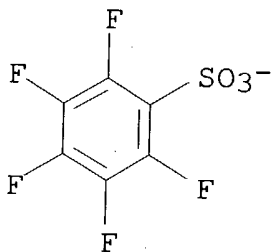
CMF C36 H28 S3



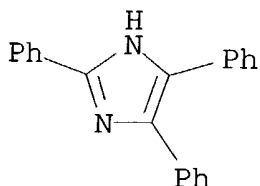
CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



IT 484-47-9, 2,4,5-Triphenylimidazole
(pos. working **resist** compn.)
RN 484-47-9 HCA
CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

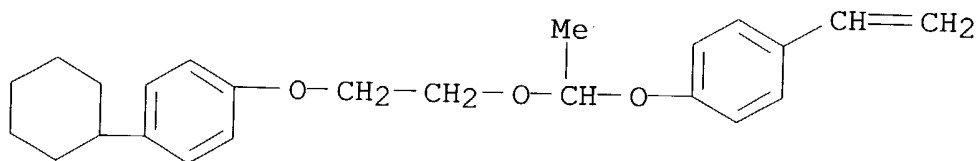


IT 503003-65-4P
(resin; pos. working **resist** compn.)
RN 503003-65-4 HCA
CN Phenol, 4-ethenyl-, polymer with 1-cyclohexyl-4-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]benzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 326591-95-1

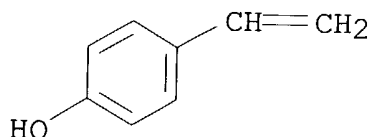
CMF C24 H30 O3



CM 2

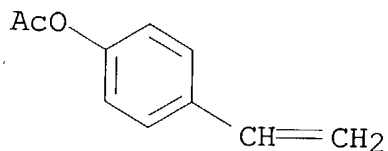
CRN 2628-17-3

CMF C8 H8 O



CM 3

CRN 2628-16-2
CMF C10 H10 O2

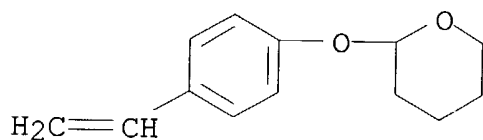


IT 125325-82-8 158593-28-3 177034-67-2
199432-82-1 279244-37-0 287381-54-8
288620-13-3 288620-15-5 326591-96-2
476479-39-7 754191-41-8 754191-43-0
754191-45-2 754191-46-3 754191-48-5
754191-50-9 754191-52-1 754191-54-3
754191-55-4 754191-56-5 754191-58-7
(resin; pos. working resist compn.)

RN 125325-82-8 HCA
CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

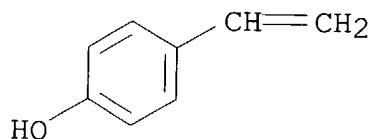
CM 1

CRN 65409-15-6
CMF C13 H16 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



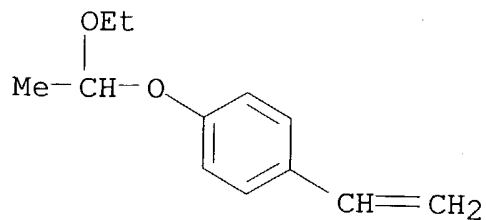
RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene

(9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0

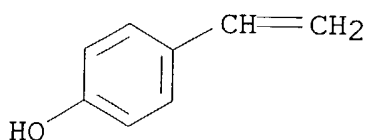
CMF C12 H16 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



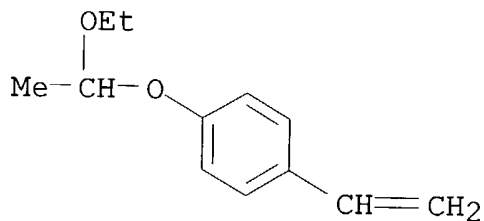
RN 177034-67-2 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene and
1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

CM 1

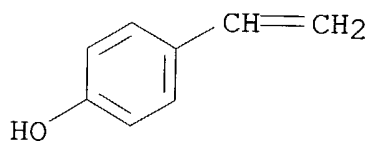
CRN 157057-20-0

CMF C12 H16 O2



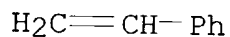
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

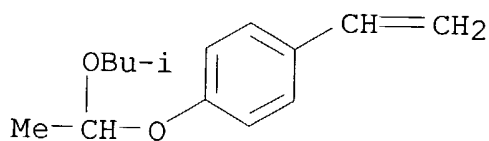
CRN 100-42-5
CMF C8 H8



RN 199432-82-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

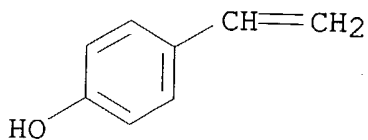
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



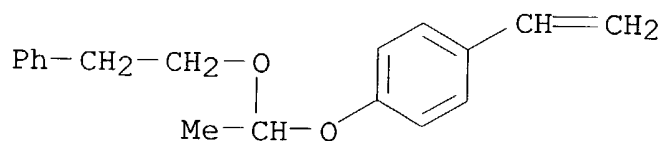
RN 279244-37-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-

phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

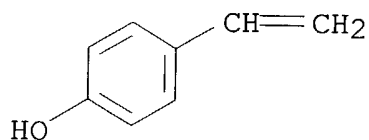
CMF C18 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



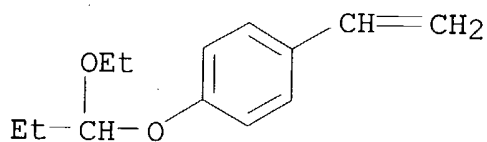
RN 287381-54-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxypropoxy)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 192314-49-1

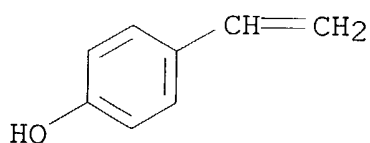
CMF C13 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



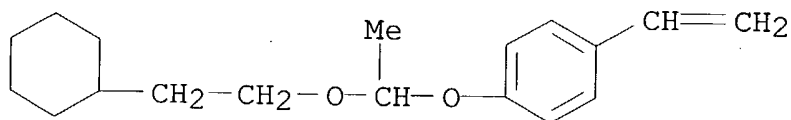
RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

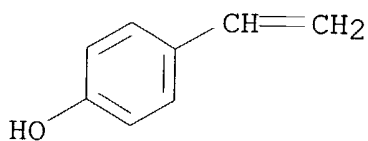
CMF C18 H26 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



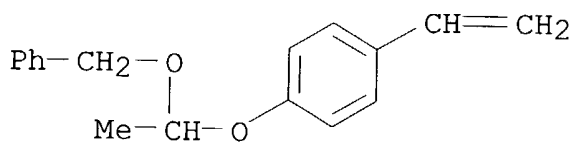
RN 288620-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-14-4

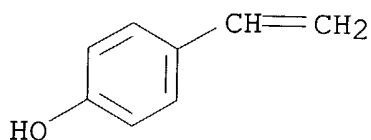
CMF C17 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



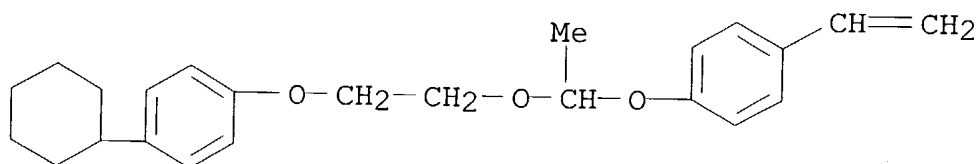
RN 326591-96-2 HCA

CN Phenol, 4-ethenyl-, polymer with 1-cyclohexyl-4-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 326591-95-1

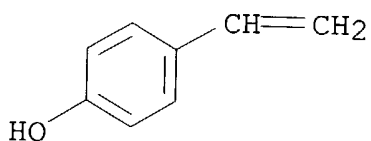
CMF C24 H30 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



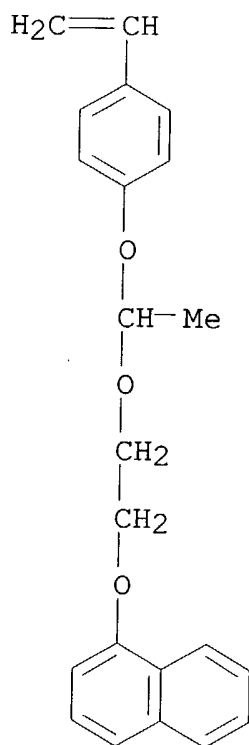
RN 476479-39-7 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]naphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 476479-38-6

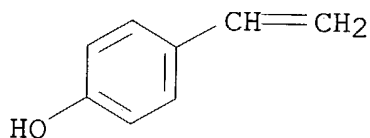
CMF C22 H22 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



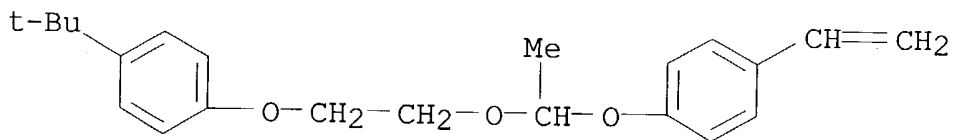
RN 754191-41-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-(1,1-dimethylethyl)-4-[[[1-(4-ethenylphenoxy)ethoxy]methyl]methyl]oxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 754191-40-7

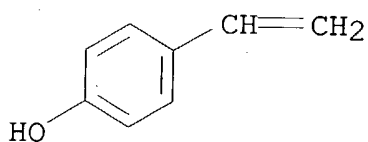
CMF C22 H28 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



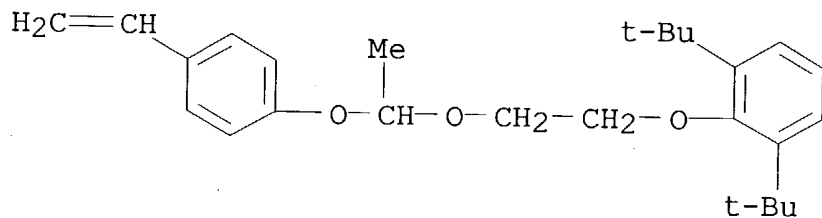
RN 754191-43-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1,3-bis(1,1-dimethylethyl)-2-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 754191-42-9

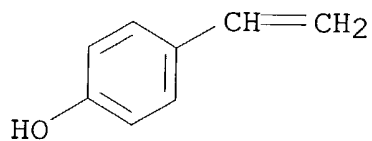
CMF C26 H36 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



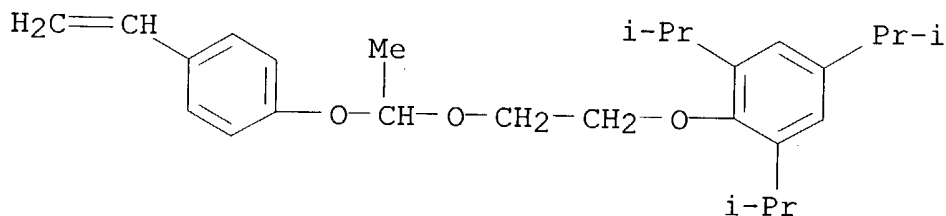
RN 754191-45-2 HCA

CN Phenol, 4-ethenyl-, polymer with 2-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]-1,3,5-tris(1-methylethyl)benzene (9CI)
(CA INDEX NAME)

CM 1

CRN 754191-44-1

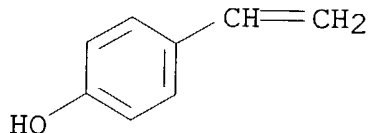
CMF C27 H38 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



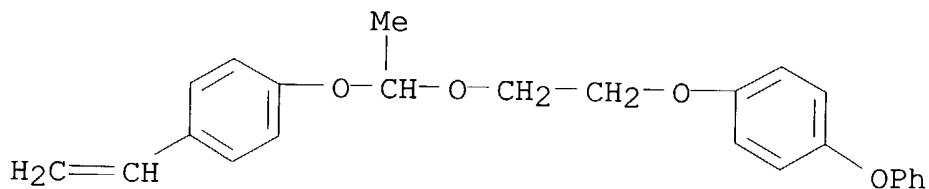
RN 754191-46-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]-4-phenoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 478273-32-4

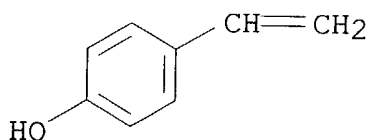
CMF C24 H24 O4



CM 2

CRN 2628-17-3

CMF C8 H8 O



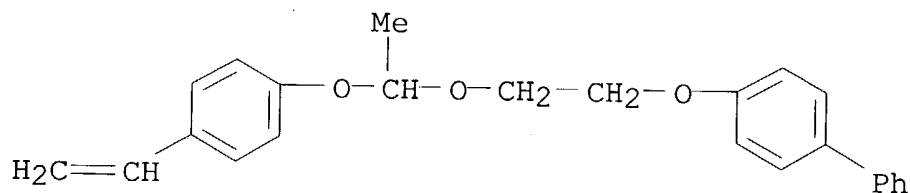
RN 754191-48-5 HCA

CN Phenol, 4-ethenyl-, polymer with 4-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]-1,1'-biphenyl (9CI) (CA INDEX NAME)

CM 1

CRN 754191-47-4

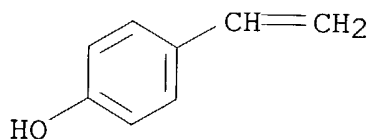
CMF C24 H24 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



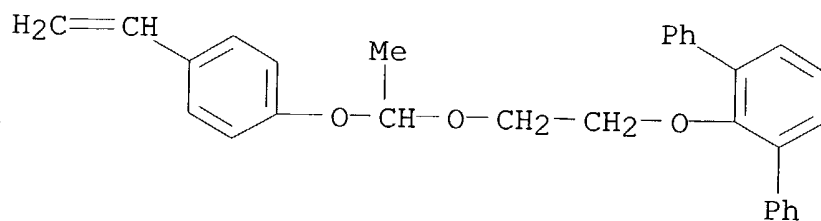
RN 754191-50-9 HCA

CN Phenol, 4-ethenyl-, polymer with 2'-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]-1,1':3',1''-terphenyl (9CI) (CA INDEX NAME)

CM 1

CRN 754191-49-6

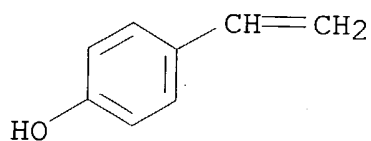
CMF C30 H28 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



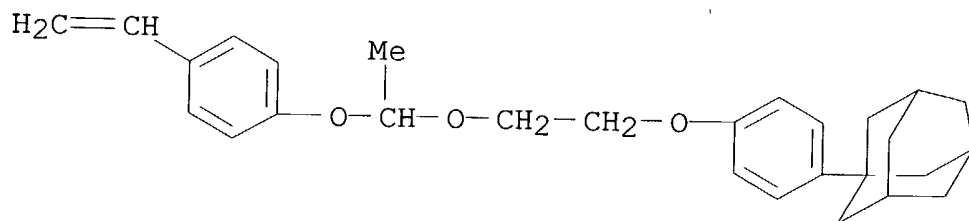
RN 754191-52-1 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[4-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]ethoxy]phenyl]tricyclo[3.3.1.1^{3,7}]decane (9CI)
(CA INDEX NAME)

CM 1

CRN 754191-51-0

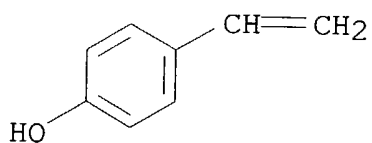
CMF C28 H34 O3



CM 2

CRN 2628-17-3

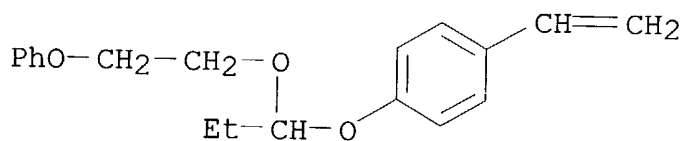
CMF C8 H8 O



RN 754191-54-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenoxyethoxy)propoxy]benzene (9CI) (CA INDEX NAME)

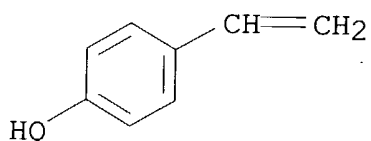
CM 1

CRN 754191-53-2
 CMF C19 H22 O3



CM 2

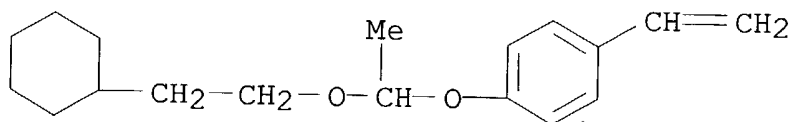
CRN 2628-17-3
 CMF C8 H8 O



RN 754191-55-4 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 1-ethenyl-4-methoxybenzene (9CI) (CA INDEX NAME)

CM 1

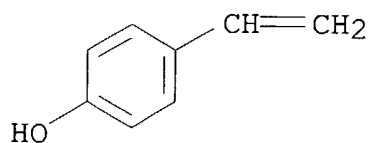
CRN 288620-12-2
 CMF C18 H26 O2



CM 2

CRN 2628-17-3

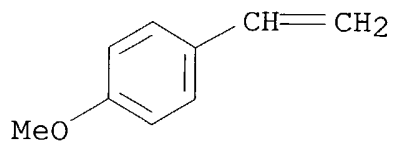
CMF C8 H8 O



CM 3

CRN 637-69-4

CMF C9 H10 O



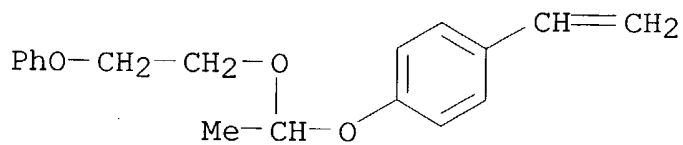
RN 754191-56-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenoxyethoxy)ethoxy]benzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 279244-34-7

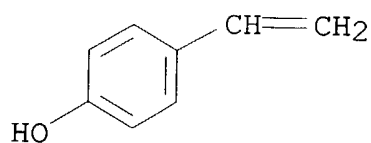
CMF C18 H20 O3



CM 2

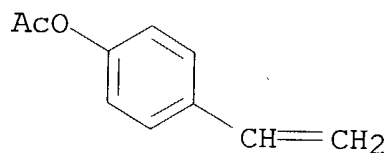
CRN 2628-17-3

CMF C8 H8 O



CM 3

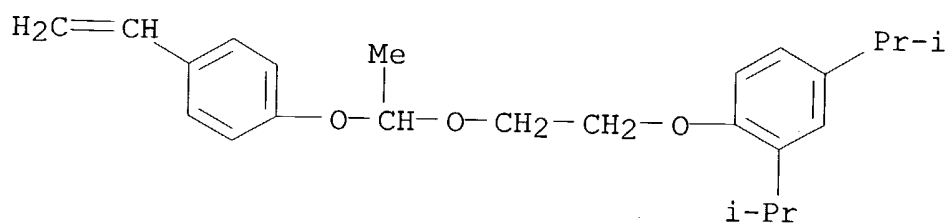
CRN 2628-16-2
CMF C10 H10 O2



RN 754191-58-7 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[2-[1-(4-ethenylphenoxy)ethoxy]ethoxy]-2,4-bis(1-methylethyl)benzene (9CI)
(CA INDEX NAME)

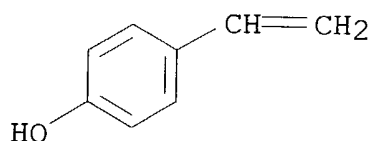
CM 1

CRN 754191-57-6
CMF C24 H32 O3



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-039
NCL 430281100; 430286100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST pos working **resist** compn **photoresist**
IT Polysiloxanes, uses
(KP341; pos. working **resist** compn.)
IT Positive **photoresists**
(UV; prepn. of **polymer** compd. for pos. working **resist** compn.)
IT 1886-74-4 10409-06-0 13891-29-7 14721-86-9 144089-15-6
144317-44-2 153698-46-5 171417-91-7 197447-16-8 251463-24-8
270563-96-7 301664-71-1 335199-99-0 343629-47-0
389859-76-1 508210-39-7 509097-30-7 591244-06-3 591244-08-5
754191-59-8 754191-60-1
(basic compd.; pos. working **resist** compn.)
IT 102-86-3, Tri-n-hexylamine **484-47-9**, 2,4,5-Triphenylimidazole 2052-49-5, Tetra-(n-butyl)ammonium hydroxide 19600-49-8 137462-24-9, Megafac F-176 216679-67-3, Megafac R08 342809-27-2 564483-94-9
(pos. working **resist** compn.)
IT 110-75-8, 2-Chloroethyl vinyl ether 1131-60-8, p-Cyclohexylphenol
(prepn. of polymer compd. for pos. working **resist** compn.)
IT 212555-24-3P, 4-Cyclohexylphenoxyethyl vinyl ether
(prepn. of polymer compd. for pos. working **resist** compn.)
IT **503003-65-4P**
(resin; pos. working **resist** compn.)
IT 125325-82-8 158593-28-3 177034-67-2
199432-82-1 279244-37-0 287381-54-8
288620-13-3 288620-15-5 326591-96-2
476479-39-7 754191-41-8 754191-43-0
754191-45-2 754191-46-3 754191-48-5
754191-50-9 754191-52-1 754191-54-3
754191-55-4 754191-56-5 754191-58-7
(resin; pos. working **resist** compn.)

fabrication of integrated circuit devices. Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1367439-A1 20031203, 100 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-11176 20030527. PRIORITY: JP 2002-152582 20020527.

AB A radiation-sensitive compn. comprises: (A) a compd. capable of generating an acid upon irradiation with one of actinic rays and radiation, and (B) a resin contg. a repeating unit having a specific group as according to the claims, which increases the soly. in an alkali developing soln. by the action of an acid. The invention provides a radiation-sensitive compn. meant for soft X-rays which has high sensitivity, high resolu., patterns having rectangular profiles and excellent LER characteristic and high dry etching resistance.

IT 270563-96-7

(acid generator; x-ray and EUV- radiation-sensitive compn. for prodn. of integrated circuit devices)

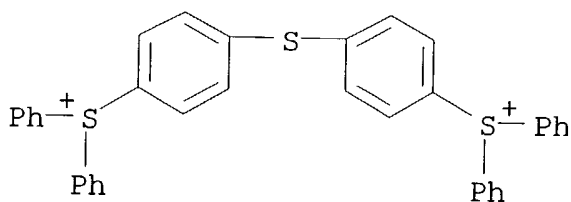
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

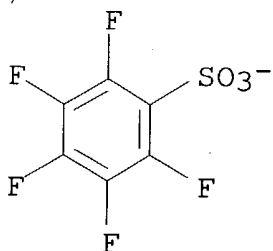
CMF C36 H28 S3



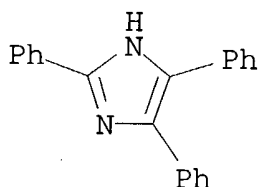
CM 2

CRN 46377-88-2

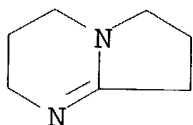
CMF C6 F5 O3 S



IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7
 (basic compd.; x-ray and EUV- radiation-sensitive compn. for
 prodn. of integrated circuit devices)
 RN 484-47-9 HCA
 CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
 CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
 (CA INDEX NAME)

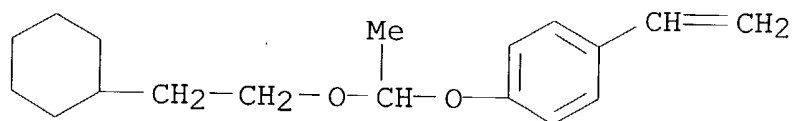


IT 630045-93-1P 630045-94-2P 630045-95-3P
 630045-96-4P 630046-00-3P
 (x-ray and EUV- radiation-sensitive compn. for prodn. of
 integrated circuit devices)
 RN 630045-93-1 HCA
 CN 2-Propenoic acid, 2-methyl-, hexahydro-2-oxo-3,5-methano-2H-
 cyclopenta[b]furan-6-yl ester, polymer with 1-[1-(2-
 cyclohexylethoxy)ethoxy]-4-ethenylbenzene, 4-ethenylphenol and
 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate (9CI)
 (CA INDEX NAME)

CM 1

CRN 288620-12-2

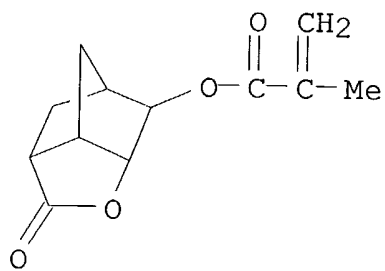
CMF C18 H26 O2



CM 2

CRN 254900-07-7

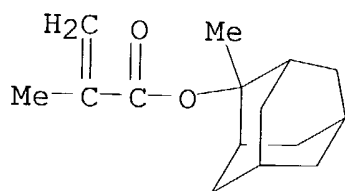
CMF C12 H14 O4



CM 3

CRN 177080-67-0

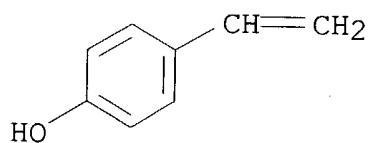
CMF C15 H22 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O

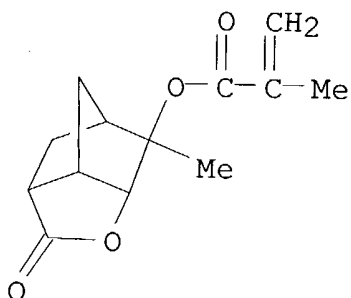


RN 630045-94-2 HCA
 CN 2-Propenoic acid, 2-methyl-, hexahydro-6-methyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene, 4-ethenylphenol, 4-ethenylphenyl acetate and 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 469886-26-8

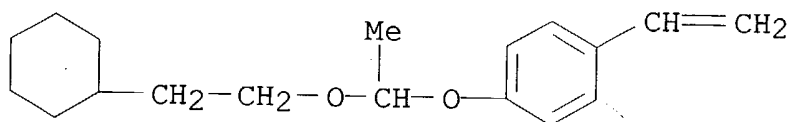
CMF C13 H16 O4



CM 2

CRN 288620-12-2

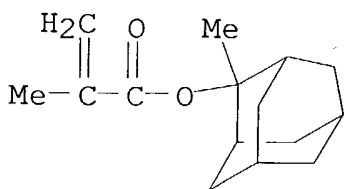
CMF C18 H26 O2



CM 3

CRN 177080-67-0

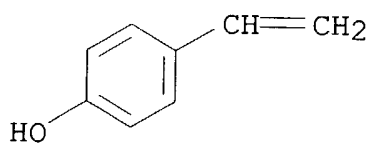
CMF C15 H22 O2



CM 4

CRN 2628-17-3

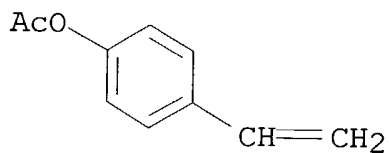
CMF C8 H8 O



CM 5

CRN 2628-16-2

CMF C10 H10 O2

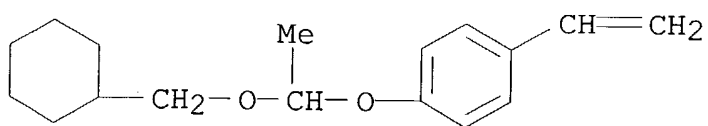


RN 630045-95-3 HCA
 CN 2-Propenoic acid, 2-methyl-, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 1-[1-(cyclohexylmethoxy)ethoxy]-4-ethenylbenzene, ethenylbenzene, 4-ethenylphenol and 1-methyl-1-tricyclo[3.3.1.1.3,7]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430437-16-4

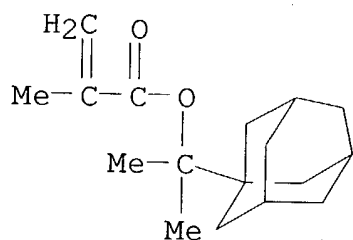
CMF C17 H24 O2



CM 2

CRN 279218-76-7

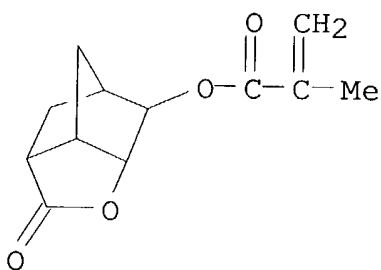
CMF C17 H26 O2



CM 3

CRN 254900-07-7

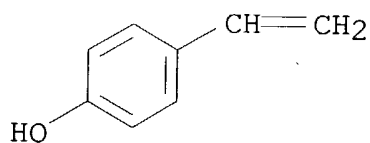
CMF C12 H14 O4



CM 4

CRN 2628-17-3

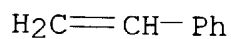
CMF C8 H8 O



CM 5

CRN 100-42-5

CMF C8 H8



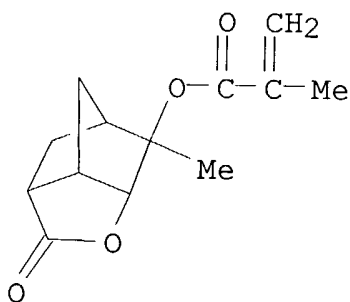
RN 630045-96-4 HCA

CN 2-Propenoic acid, 2-methyl-, hexahydro-6-methyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene, 4-ethenylphenol, 4-ethenylphenyl acetate and 1-methyl-1-tricyclo[3.3.1.1^{3,7}]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 469886-26-8

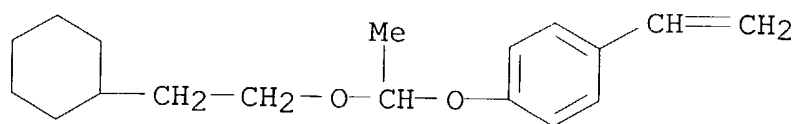
CMF C13 H16 O4



CM 2

CRN 288620-12-2

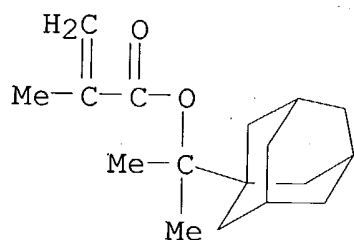
CMF C18 H26 O2



CM 3

CRN 279218-76-7

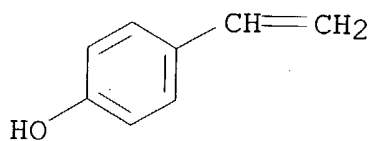
CMF C17 H26 O2



CM 4

CRN 2628-17-3

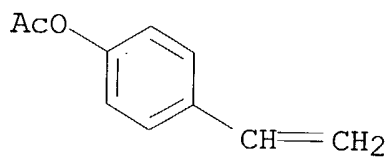
CMF C8 H8 O



CM 5

CRN 2628-16-2

CMF C10 H10 O2



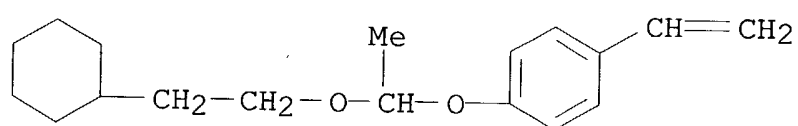
RN 630046-00-3 HCA

CN 2-Propenoic acid, 2-methyl-, 3,5-dihydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene, ethenylbenzene, 4-ethenylphenol, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

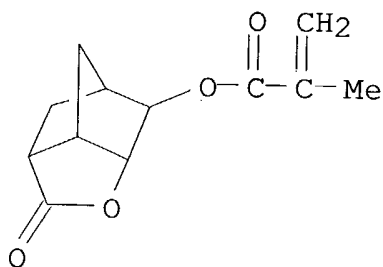
CMF C18 H26 O2



CM 2

CRN 254900-07-7

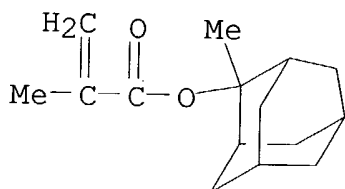
CMF C12 H14 O4



CM 3

CRN 177080-67-0

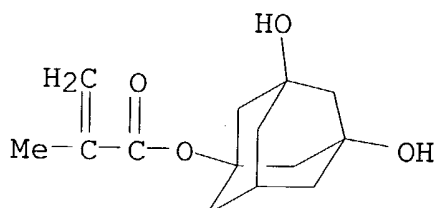
CMF C15 H22 O2



CM 4

CRN 115522-15-1

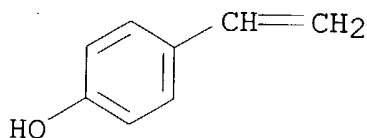
CMF C14 H20 O4



CM 5

CRN 2628-17-3

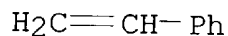
CMF C8 H8 O



CM 6

CRN 100-42-5

CMF C8 H8



IC ICM G03F007-039
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 76
 ST radiation sensitive compn x ray EUV photoresist
 IT Integrated circuits

Photoresists

(x-ray and EUV- radiation-sensitive compn. for prodn. of
 integrated circuit devices)

IT	144317-44-2	177034-80-9	227199-92-0	241806-75-7	
	270563-96-7	284474-28-8	389859-76-1	474510-73-1	
	506445-09-6	506445-10-9	506445-11-0	506445-13-2	506445-14-3
	506445-16-5	506445-17-6	506445-20-1	506445-23-4	506445-30-3

543698-35-7 630046-01-4 630046-02-5
(acid generator; x-ray and EUV- radiation-sensitive compn. for
prodn. of integrated circuit devices)

IT 484-47-9, 2,4,5-Triphenylimidazole 621-77-2,
Tripentylamine 3001-72-7 3040-44-6, 1-Piperidineethanol
19293-63-1, Dicyclohexylmethylamine 19600-49-8, Triphenylsulfonium
acetate 24544-04-5, 2,6-Diisopropylaniline

(basic compd.; x-ray and EUV- radiation-sensitive compn. for
prodn. of integrated circuit devices)

IT 630045-67-9P 630045-71-5P 630045-73-7P 630045-75-9P
630045-77-1P 630045-79-3P 630045-81-7P 630045-82-8P
630045-83-9P 630045-85-1P 630045-86-2P 630045-88-4P
630045-90-8P 630045-92-0P 630045-93-1P

630045-94-2P 630045-95-3P 630045-96-4P

630045-99-7P 630046-00-3P

(x-ray and EUV- radiation-sensitive compn. for prodn. of
integrated circuit devices)

L46 ANSWER 3 OF 23 HCA COPYRIGHT 2004 ACS on STN

139:401553 Negative **resist** composition for electron beam or
x-ray lithography. Takahashi, Akira; Yasunami, Shoichiro; Adekawa,
Yutaka (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho
JP 2003337414 A2 20031128, 36 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 2002-144677 20020520.

AB The compn. comprises (A) compds. generating sulfonic acids by
actinic ray or radiation, (B) alkali-sol. resins having repeating
units with partial structure of RC6R1R2R3R4R5 (R = direct bond,
divalent linking group; R1-R5 = substituent, CR6R7OR8; R6, R7 = H,
alkyl; R6 and R7 may form ring; R8 = H, acetyl, tert-butoxycarbonyl,
alkyl), (C) solvents, and preferably, (D) org. basic compds. The
compn. shows high sensitivity, resolu., and storage stability of
sensitivity and low line edge roughness when irradiated with
electron beam or x-ray.

IT 177786-98-0

(acid generator; neg. **resist** compn. contg. sulfonic
acid generators and alkali-sol. resins for electron beam or x-ray
lithog.)

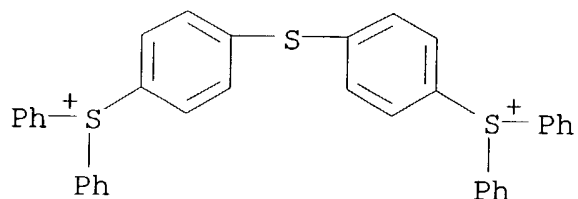
RN 177786-98-0 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

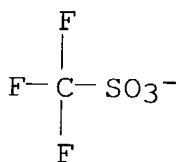
CMF C36 H28 S3



CM 2

CRN 37181-39-8

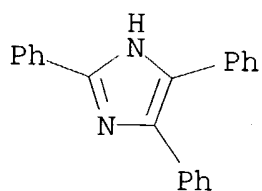
CMF C F3 O3 S



IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3,
 4-Dimethylaminopyridine 3001-72-7
 (basic compds.; neg. **resist** compn. contg. sulfonic acid
 generators and alkali-sol. resins for electron beam or x-ray
 lithog.)

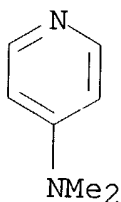
RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

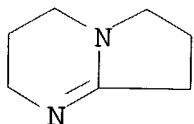


RN 1122-58-3 HCA

CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)



IT 154469-53-1P

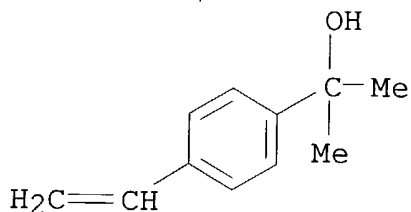
(neg. **resist** compn. contg. sulfonic acid generators and
alkali-sol. resins for electron beam or x-ray lithog.)

RN 154469-53-1 HCA
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-dimethyl-, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 3049-88-5

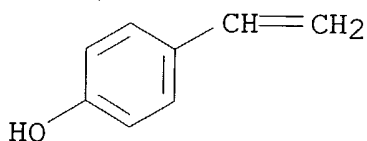
CMF C11 H14 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



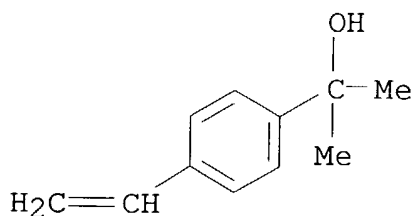
IT 627091-32-1 627091-34-3 627091-36-5
627091-38-7

(neg. **resist** compn. contg. sulfonic acid generators and
alkali-sol. resins for electron beam or x-ray lithog.)

RN 627091-32-1 HCA
CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-dimethyl-, polymer with
3-ethenylphenol (9CI) (CA INDEX NAME)

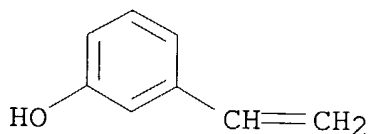
CM 1

CRN 3049-88-5
CMF C11 H14 O



CM 2

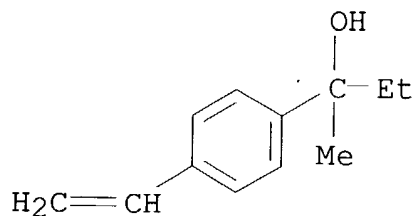
CRN 620-18-8
CMF C8 H8 O



RN 627091-34-3 HCA
CN Benzenemethanol, 4-ethenyl-.alpha.-ethyl-.alpha.-methyl-, polymer
with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

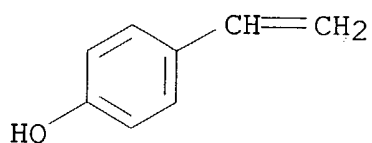
CRN 23679-26-7
CMF C12 H16 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



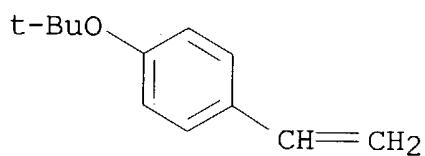
RN 627091-36-5 HCA

CN Benzenemethanol, 4-ethenyl-.alpha.,.alpha.-dimethyl-, polymer with
1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

CRN 95418-58-9

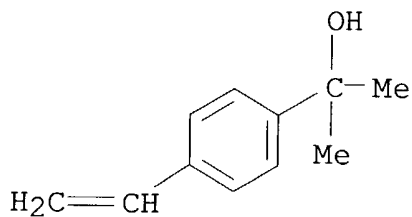
CMF C12 H16 O



CM 2

CRN 3049-88-5

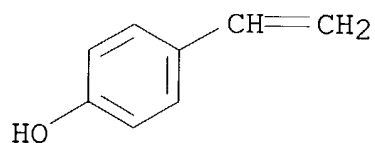
CMF C11 H14 O



CM 3

CRN 2628-17-3

CMF C8 H8 O



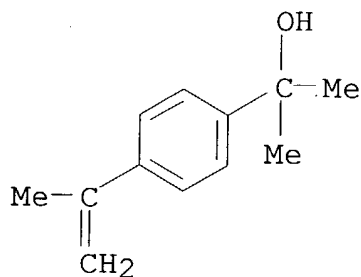
RN 627091-38-7 HCA

CN Benzenemethanol, .alpha.,.alpha.-dimethyl-4-(1-methylethenyl)-,
polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX
NAME)

CM 1

CRN 24802-06-0

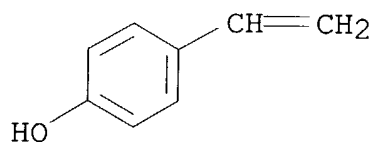
CMF C12 H16 O



CM 2

CRN 2628-17-3

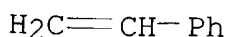
CMF C8 H8 O



CM 3

CRN 100-42-5

CMF C8 H8



- IC ICM G03F007-038
ICS C08F012-22; G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST neg **resist** sulfonic acid generation compd; alkali soluble resin neg **resist**; x ray lithog neg **resist**; electron beam lithog neg **resist**
- IT Electron beam **resists**
X-ray **resists**
(neg.-working; neg. **resist** compn. contg. sulfonic acid generators and alkali-sol. resins for electron beam or x-ray lithog.)
- IT 84563-54-2 138529-81-4 144089-15-6 144317-44-2
177786-98-0 270563-93-4 454471-05-7
(acid generator; neg. **resist** compn. contg. sulfonic acid generators and alkali-sol. resins for electron beam or x-ray lithog.)
- IT 100-97-0, uses 110-85-0, Piperazine, uses 121-44-8, Triethylamine, uses 280-48-8, 1,3-Diazabicyclo[2.2.2]octane **484-47-9**, 2,4,5-Triphenylimidazole **1122-58-3**, 4-Dimethylaminopyridine **3001-72-7** 24544-04-5, 2,6-Diisopropylaniline 122936-95-2 529510-73-4, CHMETU (basic compds.; neg. **resist** compn. contg. sulfonic acid generators and alkali-sol. resins for electron beam or x-ray lithog.)
- IT **154469-53-1P**
(neg. **resist** compn. contg. sulfonic acid generators and alkali-sol. resins for electron beam or x-ray lithog.)
- IT 627091-27-4 627091-29-6 **627091-32-1** **627091-34-3**
627091-36-5 **627091-38-7**
(neg. **resist** compn. contg. sulfonic acid generators and alkali-sol. resins for electron beam or x-ray lithog.)
- L46 ANSWER 4 OF 23 HCA COPYRIGHT 2004 ACS on STN
139:125127 Positive **resists** satisfying high sensitivity, resolution, pattern profile, and less PED (post-exposure delay) in vacuo. Yasunami, Shoichiro; Kodama, Kunihiro; Shirakawa, Hiroshi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003207898 A2 (20030725) 34 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-324003 20021107. PRIORITY: JP 2001-343163 20011108.
- AB The **resists** comprise (A) alkali-insol. or -poorly-sol. polymers which become alkali sol. upon acid action, (B) radiation-sensitive sulfonic acid generators, (C)

radiation-sensitive carboxylic acid generators, and (D) quaternary ammonium salt compds.

IT 24979-70-2DP, VP 8000, hydrolyzed 129674-22-2P
(binders; chem. amplified pos. electron-beam or x-ray
resists contg. two kinds of acid generators and showing
less PED in vacuo)

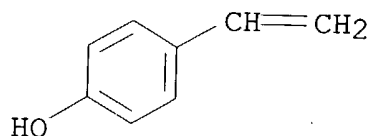
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



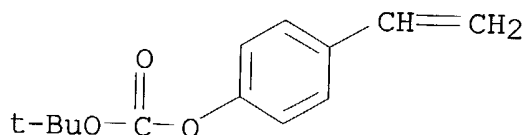
RN 129674-22-2 HCA

CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 87188-51-0

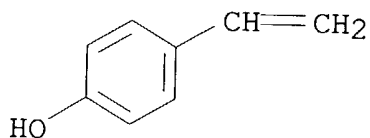
CMF C13 H16 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



IT 142952-62-3 359434-80-3

(binders; chem. amplified pos. electron-beam or x-ray
resists contg. two kinds of acid generators and showing
 less PED in vacuo)

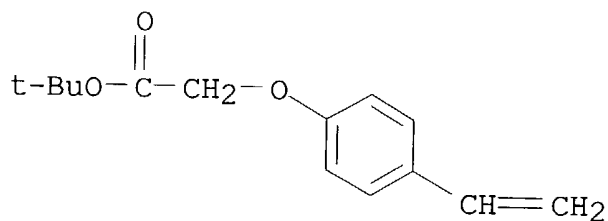
RN 142952-62-3 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer
 with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

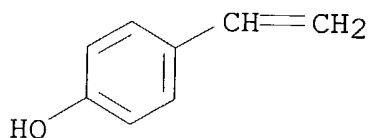
CMF C14 H18 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



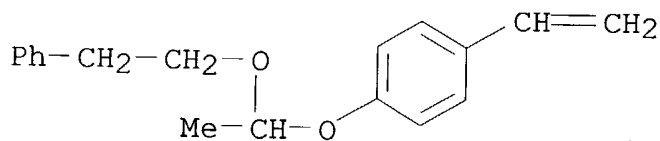
RN 359434-80-3 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and
 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

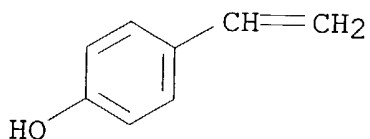
CMF C18 H20 O2



CM 2

CRN 2628-17-3

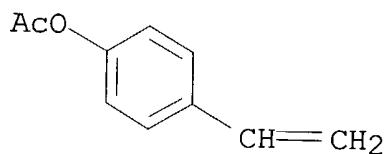
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



IT 398141-47-4 564483-98-3 564483-99-4
 (carboxylic acid generators; chem. amplified pos. electron-beam
 or x-ray **resists** contg. two kinds of acid generators
 and showing less PED in vacuo)

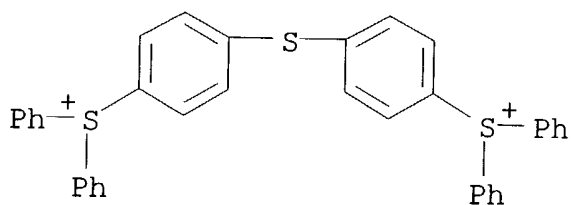
RN 398141-47-4 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, diacetate (9CI) (CA
 INDEX NAME)

CM 1

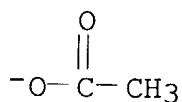
CRN 74227-34-2

CMF C36 H28 S3



CM 2

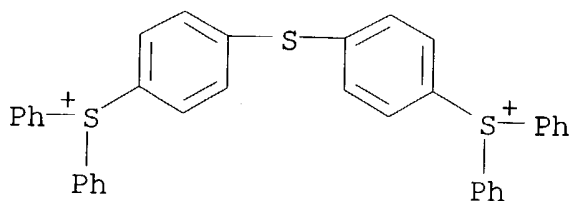
CRN 71-50-1
CMF C2 H3 O2



RN 564483-98-3 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, dioctadecanoate
(9CI) (CA INDEX NAME)

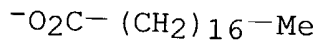
CM 1

CRN 74227-34-2
CMF C36 H28 S3



CM 2

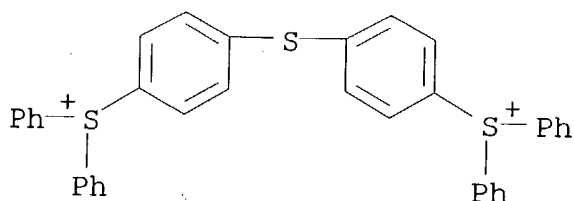
CRN 646-29-7
CMF C18 H35 O2



RN 564483-99-4 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
4-(trifluoromethyl)benzoic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

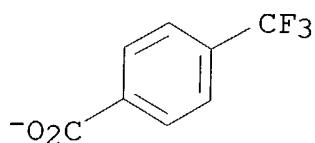
CRN 74227-34-2
CMF C36 H28 S3



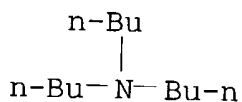
CM 2

CRN 74056-34-1

CMF C8 H4 F3 O2



IT 102-82-9, Tributylamine
 (sensitizers; chem. amplified pos. electron-beam or x-ray
resists contg. two kinds of acid generators and showing
 less PED in vacuo)
 RN 102-82-9 HCA
 CN 1-Butanamine, N,N-dibutyl- (9CI) (CA INDEX NAME)

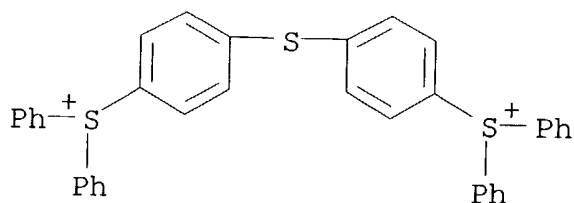


IT 270563-96-7
 (sulfonic acid generators; chem. amplified pos. electron-beam or
 x-ray **resists** contg. two kinds of acid generators and
 showing less PED in vacuo)
 RN 270563-96-7 HCA
 CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
 pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

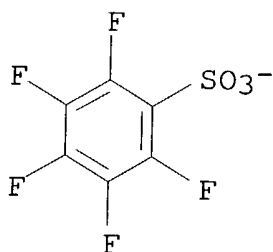
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



- IC ICM G03F007-039
ICS C08F212-14; C08F220-18; C08F220-28; C08F222-34; C08F222-40;
G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
- ST electron beam x ray **resist** PED minimized; sulfonic
carboxylic acid generator amplified **resist**; sensitivity
resoln pattern profile amplified **resist**; quaternary
ammonium sensitized chem amplified **resist**
- IT Quaternary ammonium compounds, uses
(compds.; chem. amplified pos. electron-beam or x-ray
resists contg. two kinds of acid generators and showing
less PED in vacuo)
- IT Electron beam **resists**
X-ray **resists**
(pos.-working; chem. amplified pos. electron-beam or x-ray
resists contg. two kinds of acid generators and showing
less PED in vacuo)
- IT 24979-70-2DP, VP 8000, hydrolyzed 129674-22-2P
160309-96-6DP, p-Acetoxystyrene-tert-butyl methacrylate copolymer,
hydrolyzed
(binders; chem. amplified pos. electron-beam or x-ray

- resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 142952-62-3 359434-80-3
(binders; chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 19600-49-8P, Triphenylsulfonium acetate 359434-73-4P
(carboxylic acid generators; chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 1511-10-0 342809-27-2 365971-81-9 372968-17-7, uses
398141-47-4 462648-07-3 462648-08-4 564483-94-9
564483-95-0 564483-96-1 564483-97-2 564483-98-3
564483-99-4 564484-00-0 564484-01-1 564484-03-3
(carboxylic acid generators; chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 3744-08-9P, Triphenylsulfonium iodide 258342-09-5P
(chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 212555-24-3DP, 4-Cyclohexylphenoxyethyl vinyl ether, reaction products with polyhydroxystyrene
(chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 110-75-8, 2-Chloroethyl vinyl ether 945-51-7, Diphenyl sulfoxide
1131-60-8, p-Cyclohexylphenol 2049-95-8, tert-Amylbenzene
7758-05-6, Potassium iodate
(chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 75-57-0 75-59-2 77-98-5 102-82-9, Tributylamine
1119-94-4 2052-49-5 10581-12-1 31718-13-5 36880-49-6
62510-53-6
(sensitizers; chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)
- IT 1886-74-4 66003-78-9 138046-36-3 144089-15-6 144317-44-2
153698-46-5 193345-23-2 194712-93-1 197447-16-8 258341-98-9
270563-92-3 270563-96-7 312386-77-9 335385-79-0
335385-82-5 398457-16-4 543700-40-9 564472-78-2
(sulfonic acid generators; chem. amplified pos. electron-beam or x-ray **resists** contg. two kinds of acid generators and showing less PED in vacuo)

excellent sensitivity, resolution, and pattern profile. Takahashi, Omote; Yasunami, Shoichiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003149800 A2 20030521, 28 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-346121 20011112.

GI

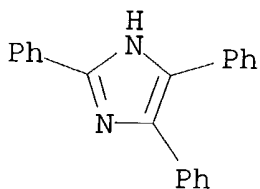
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title pos.-working **resist** compn., sensitive to an electron beam, x-ray, and 150-250 nm excimer laser, comprises (A) an acid generator represented by I (W = CH₂, CYH, NH; Y = aryl, alkyl; R1a-8a = H, halo, OH, thiol, nitro, cyano, carboxyl, amino, alkyl, alkoxy), II (R1-15 = H, alkyl, alkoxy, hydroxy, halo, SR38; R38 = alkyl, aryl; X = F-contg. alkylsulfonic acid, benzenesulfonic acid, naphthalenesulfonic acid, anthracenesulfonic acid), III (R16-27 = H, alkyl, alkoxy, hydroxy, halo, SR38; R38 = alkyl, aryl; X = F-contg. alkylsulfonic acid, benzenesulfonic acid, naphthalenesulfonic acid, anthracenesulfonic acid), or IV (R28-37 = H, alkyl, alkoxy, hydroxy, halo, SR38; R38 = alkyl, aryl; X = F-contg. alkylsulfonic acid, benzenesulfonic acid, naphthalenesulfonic acid, anthracenesulfonic acid), and (B) a polymer which is insol. or difficult sol. to an alk. aq. soln. and becomes sol. to the alk. aq. soln. upon an interaction with the generated acid, and optionally (C) a N-contg. base compd.

IT **484-47-9**, 2,4,5-Triphenylimidazole **1122-58-3**,
4-Dimethylaminopyridine **3001-72-7**, 1,5-
Diazabicyclo[4.3.0]non-5-ene
(N-contg. base compd. in pos.-working **resist** compn.
showing excellent sensitivity, resolu., and pattern profile)

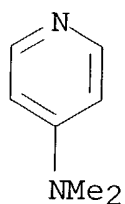
RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

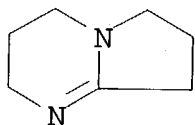


RN 1122-58-3 HCA

CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
 CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
 (CA INDEX NAME)



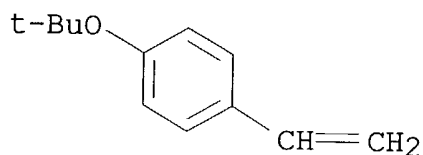
IT 123589-22-0 258871-96-4 279244-37-0
 288620-13-3 359434-80-3
 (acid decomposable polymer; pos.-working **resist** compn.
 showing excellent sensitivity, resoln., and pattern profile)

RN 123589-22-0 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 95418-58-9

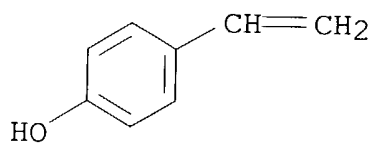
CMF C12 H16 O



CM 2

CRN 2628-17-3

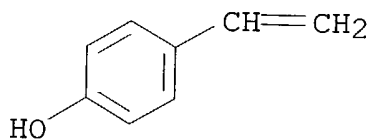
CMF C8 H8 O



RN 258871-96-4 HCA
 CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with
 ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

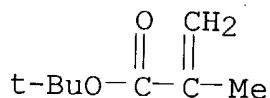
CM 1

CRN 2628-17-3
 CMF C8 H8 O



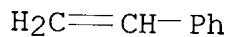
CM 2

CRN 585-07-9
 CMF C8 H14 O2



CM 3

CRN 100-42-5
 CMF C8 H8

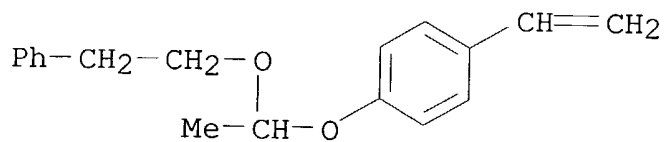


RN 279244-37-0 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

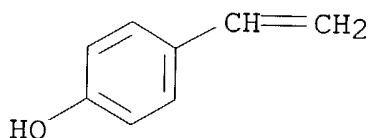
CMF C18 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



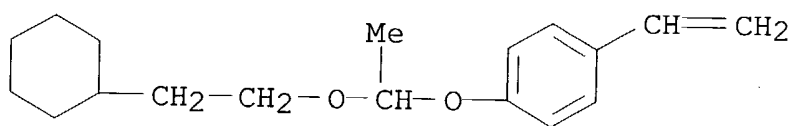
RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

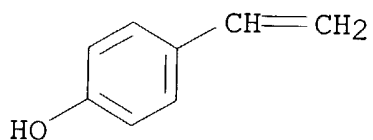
CMF C18 H26 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



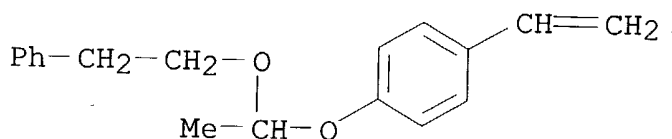
RN 359434-80-3 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and
1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

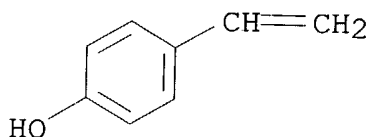
CMF C18 H20 O2



CM 2

CRN 2628-17-3

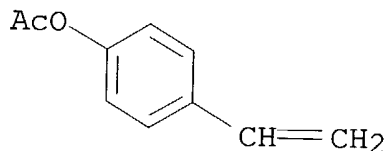
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



IT 270563-96-7

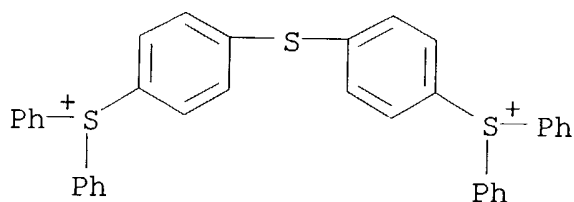
(acid generator; pos.-working **resist** compn. showing
excellent sensitivity, resoln., and pattern profile)

RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

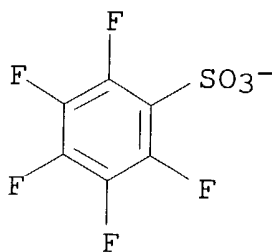
CM 1

CRN 74227-34-2
CMF C36 H28 S3



CM 2

CRN 46377-88-2
CMF C6 F5 O3 S



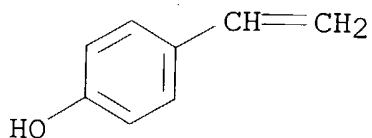
IT 24979-70-2DP, VP 8000, reaction products with di-tert-Bu
bicarbonate 125325-82-8P 142952-62-3P
158593-28-3P 196709-91-8P 426832-91-9P
(prepn. of acid decomposable polymer for pos.-working
resist compn. showing excellent sensitivity, resoln., and
pattern profile)

RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

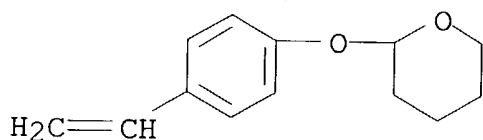
CRN 2628-17-3
CMF C8 H8 O



RN 125325-82-8 HCA
 CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

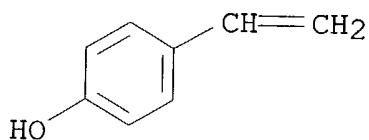
CM 1

CRN 65409-15-6
 CMF C13 H16 O2



CM 2

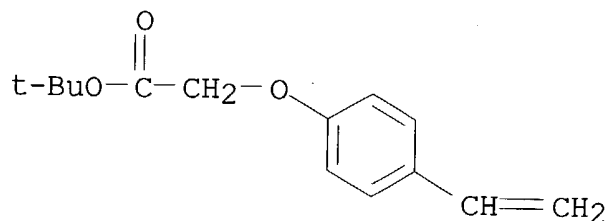
CRN 2628-17-3
 CMF C8 H8 O



RN 142952-62-3 HCA
 CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

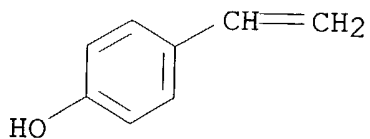
CM 1

CRN 142952-61-2
 CMF C14 H18 O3



CM 2

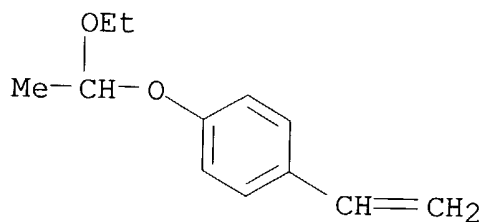
CRN 2628-17-3
CMF C8 H8 O



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

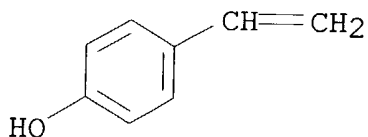
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

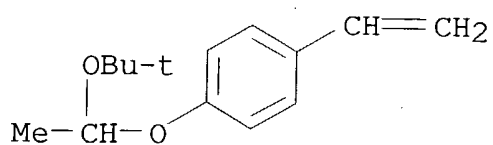
CRN 2628-17-3
CMF C8 H8 O



RN 196709-91-8 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

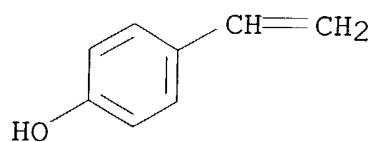
CRN 169811-45-4
CMF C14 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



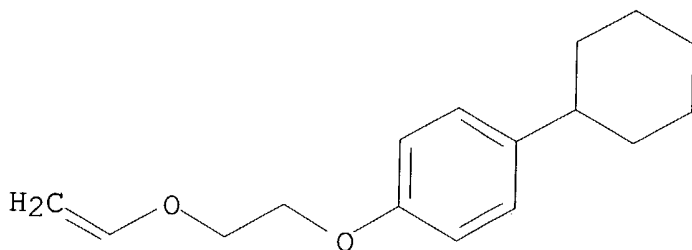
RN 426832-91-9 HCA

CN Phenol, 4-ethenyl-, polymer with 1-cyclohexyl-4-[2-(ethenyloxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 212555-24-3

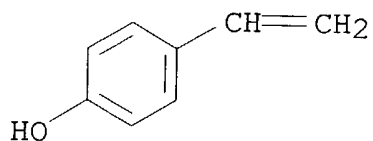
CMF C16 H22 O2



CM 2

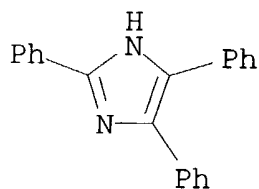
CRN 2628-17-3

CMF C8 H8 O



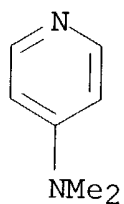
- IC ICM G03F007-004
ICS C07C025-18; C07C381-12; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST pos working **resist** compn acid generator chem amplified; electron beam **resist** compn pos working acid generator; x ray **resist** compn pos working acid generator; **photoresist** compn pos working photoacid generator semiconductor device fabrication
- IT Positive **photoresists**
(chem. amplified; pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT Semiconductor device fabrication
(pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile for)
- IT Electron beam **resists**
X-ray **resists**
(pos.-working, chem. amplified; pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT 100-97-0, Hexamethylenetetramine, uses 110-89-4, Piperidine, uses 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 2002-16-6, Phenylguanidine 3001-72-7, 1,5-Diazabicyclo[4.3.0]non-5-ene 24544-04-5, 2,6-Diisopropylaniline 122936-95-2, 1,8-Diazabicyclo[4.3.0]non-5-ene 529510-73-4, CHME-TU
(N-contg. base compd. in pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT 123589-22-0 258871-96-4 279244-37-0 288620-13-3 359434-80-3
(acid decomposable polymer; pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT 144317-44-2 270563-93-4 270563-96-7 514846-95-8 514846-96-9 514846-98-1 514847-00-8 514847-02-0 514847-04-2 514847-06-4 514847-08-6 514847-10-0 514847-12-2 514847-15-5 528853-06-7 528853-07-8 528853-09-0 528853-11-4
(acid generator; pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT 153698-46-5P 514846-94-7P
(acid generator; pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)

- IT 24424-99-5DP, Di-tert-butyl dicarbonate, reaction products with poly(p-hydroxystyrene) 24979-70-2DP, VP 8000, reaction products with di-tert-Bu bicarbonate 119359-85-2P
125325-82-8P 142952-62-3P 158593-28-3P
160309-96-6P, p-Acetoxystyrene-tert-butyl methacrylate copolymer 196709-91-8P 426832-91-9P 528853-12-5P
(prepn. of acid decomposable polymer for pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT 258341-98-9P
(prepn. of acid generator for pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- IT 75-59-2, Tetramethylammonium hydroxide 832-53-1, Pentafluorobenzenesulfonylchloride 2049-95-8, tert-Amylbenzene 7758-05-6, Potassium iodate 10133-81-0, Thioxanthene 10 oxide 12027-06-4, Ammonium iodide 514846-93-6
(prepn. of acid generator for pos.-working **resist** compn. showing excellent sensitivity, resoln., and pattern profile)
- L46 ANSWER 6 OF 23 HCA COPYRIGHT 2004 ACS on STN
- 138:346477 Chemically-amplified negative-working **resist** compositions containing alkali-soluble polymers and crosslinking agents. Shirakawa, Hiroshi; Adekawa, Yutaka; Yasunami, Shoichiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003122006 A2 (20030425), 47 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-322176 20011019.
- AB The compns., which are sensitive to KrF excimer laser, electron beam, or x-ray and show high sensitivity and resoln., good pattern profile, and reduced line-edge roughness, contain (A) compds. generating acids upon irradiation with actinic ray or radiation, (B) alkali-sol. polymers, (C) crosslinking agents for (B), and optionally (E) N-contg. basic compds., wherein (C) contain .gtoreq.2 selected from phenol derivs. having .gtoreq.2 hydroxymethyl and/or alkoxymethyl groups on the benzene ring and one of them contains 1-2 benzene ring and the other contains 3-5 benzene rings.
- IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 24979-69-9 24979-70-2 24979-73-5 24980-18-5 321164-59-4 345212-25-1 345212-56-8 345212-57-9 396098-38-7
(chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxymethyl groups)
- RN 484-47-9 HCA
- CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 1122-58-3 HCA

CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



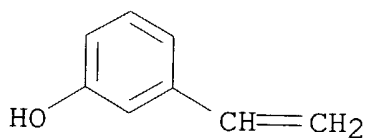
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



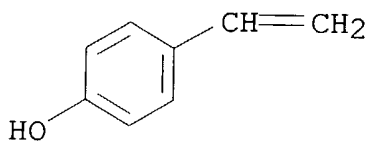
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



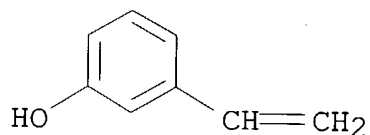
RN 24979-73-5 HCA

CN Phenol, 3-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

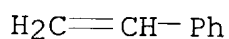
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



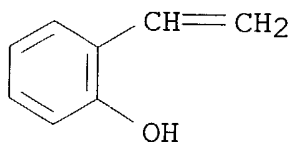
RN 24980-18-5 HCA

CN Phenol, 2-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 695-84-1

CMF C8 H8 O



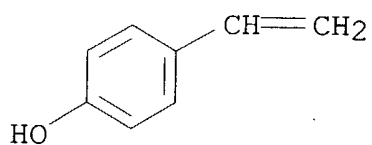
RN 321164-59-4 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

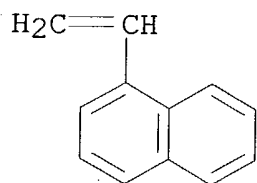
CMF C8 H8 O



CM 2

CRN 826-74-4

CMF C12 H10



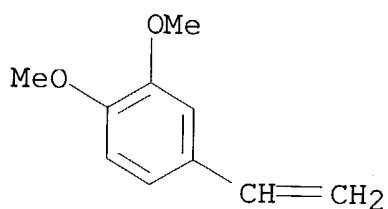
RN 345212-25-1 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenyl-1,2-dimethoxybenzene
(9CI) (CA INDEX NAME)

CM 1

CRN 6380-23-0

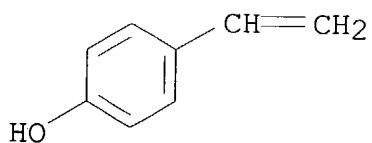
CMF C10 H12 O2



CM 2

CRN 2628-17-3

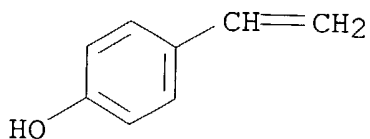
CMF C8 H8 O



RN 345212-56-8 HCA
CN Phenol, 4-ethenyl-, polymer with 2-ethenylnaphthalene (9CI) (CA INDEX NAME)

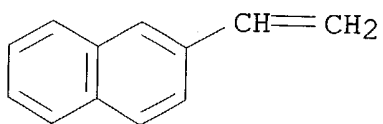
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

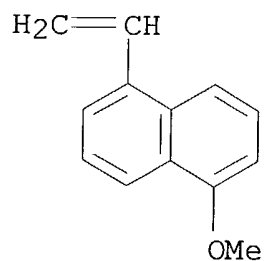
CRN 827-54-3
CMF C12 H10



RN 345212-57-9 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-5-methoxynaphthalene (9CI) (CA INDEX NAME)

CM 1

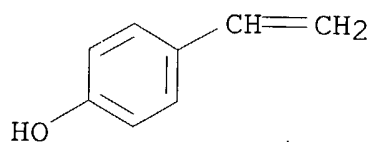
CRN 105903-84-2
CMF C13 H12 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



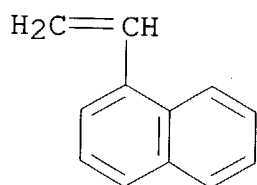
RN 396098-38-7 HCA

CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 826-74-4

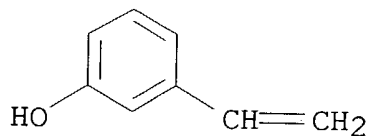
CMF C12 H10



CM 2

CRN 620-18-8

CMF C8 H8 O



IT 177786-98-0 270563-96-7

(photoacid generator; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

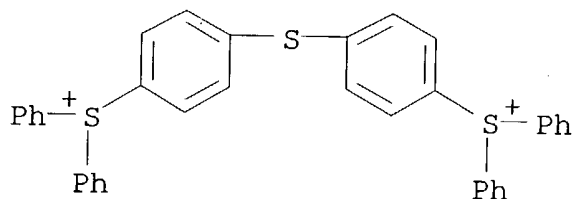
RN 177786-98-0 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

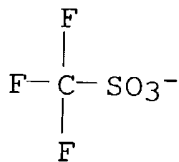
CMF C36 H28 S3



CM 2

CRN 37181-39-8

CMF C F3 O3 S



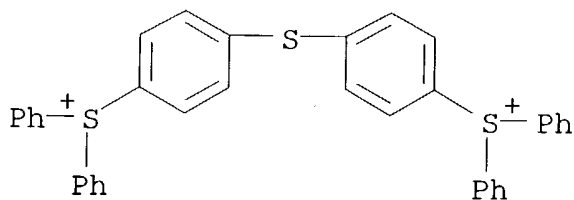
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

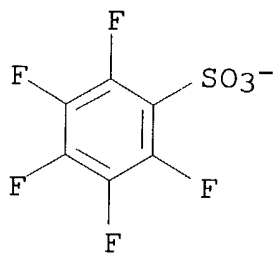
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



- IC ICM G03F007-038
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST chem amplified neg working **resist** methylol crosslinking agent; polyphenyl methylol crosslinking agent chem amplified neg **resist**
- IT Crosslinking agents
Negative **photoresists**
(chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)
- IT Electron beam **resists**
(neg.-working; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)
- IT 173786-80-6DP, 4-Acetoxystyrene-4-methoxystyrene copolymer, hydrolyzed
(chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)
- IT 51-17-2, Benzimidazole 484-47-9, 2,4,5-Triphenylimidazole

1122-58-3, 4-Dimethylaminopyridine 5622-97-9

24979-69-9 24979-70-2 24979-73-5

24980-18-5 215383-34-9 321164-59-4

345212-25-1 345212-56-8 345212-57-9

396098-38-7

(chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 161679-94-3P 162846-57-3P

(crosslinking agent; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 5568-04-7 7451-94-7 185502-14-1 197087-74-4 205928-58-1

322406-72-4 346694-58-4 421546-91-0 455943-61-0 515837-54-4

515837-55-5

(crosslinking agent; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 3744-08-9P, Triphenylsulfonium iodide 258342-09-5P 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate

(in prepn. of photoacid generator; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 71-43-2, Benzene, reactions 75-59-2, Tetramethylammonium hydroxide 832-53-1, Pentafluorobenzenesulfonyl chloride 945-51-7, Diphenyl sulfoxide 2049-95-8, [tert-Amylbenzene

(in prepn. of photoacid generator; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 110726-28-8, Trisp-PA

(methylolation of; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate

258341-98-9P, Di(4-tert-amylphenyl)iodonium pentafluorobenzenesulfonate

(photoacid generator; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

IT 142096-70-6 144317-44-2 153698-66-9 177786-98-0

251463-24-8 270563-96-7 338445-30-0

(photoacid generator; chem.-amplified neg.-working **resist** compns. contg. alkali-sol. polymers and .gtoreq.2 crosslinking agents having hydroxymethyl or alkoxyethyl groups)

L46 ANSWER 7 OF 23 HCA COPYRIGHT 2004 ACS on STN

138:311557 Negative-working **resist** composition containing

alicyclic compound for x-ray and electron beam. Takahashi, Omote;

Yasunami, Shoichiro; Adegawa, Yutaka (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003107705 A2/20030409, 94 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-302633 20010928.

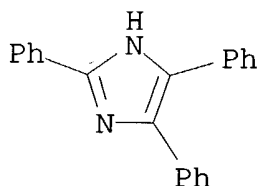
AB The neg.-working **resist** compn. comprises (A) a photoacid, (B) an alkali-sol. resin, (C) a compd. having an alicyclic ring and generating water upon the interaction with an acid, and (D) a basic compd. The use of the alicyclic compd. provided both high sensitivity and high resolu.

IT **484-47-9 3001-72-7 24979-69-9**,
3-Hydroxystyrene homopolymer **24979-70-2**, p-Hydroxystyrene homopolymer **24979-74-6**, 4-Hydroxystyrene-styrene copolymer **24980-18-5**, o-Hydroxystyrene homopolymer **149614-53-9**, 3-Hydroxystyrene-4-Hydroxystyrene copolymer **171429-59-7 321164-59-4 396098-38-7 477705-24-1**

(neg.-working **resist** compn. contg. alicyclic compd. for x-ray and electron beam)

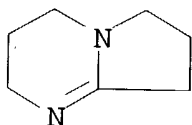
RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA

CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)



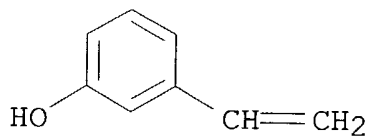
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

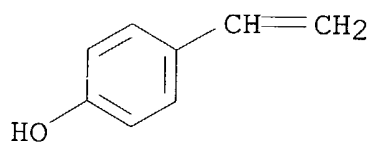
CMF C8 H8 O



RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

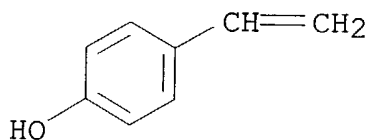
CRN 2628-17-3
CMF C8 H8 O



RN 24979-74-6 HCA
CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

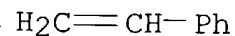
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 100-42-5
CMF C8 H8

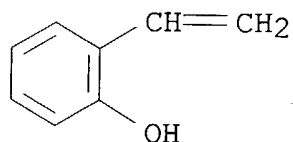


RN 24980-18-5 HCA
CN Phenol, 2-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 695-84-1

CMF C8 H8 O



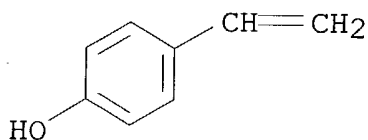
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

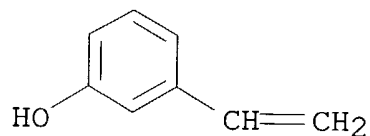
CMF C8 H8 O



CM 2

CRN 620-18-8

CMF C8 H8 O



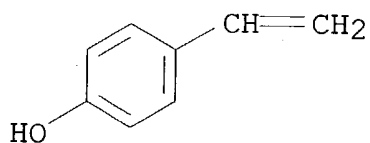
RN 171429-59-7 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

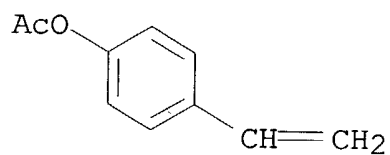
CMF C8 H8 O



CM 2

CRN 2628-16-2

CMF C10 H10 O2



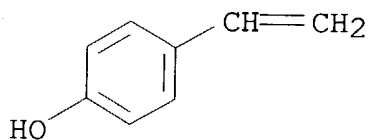
RN 321164-59-4 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 2628-17-3

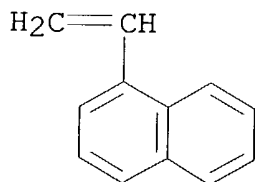
CMF C8 H8 O



CM 2

CRN 826-74-4

CMF C12 H10

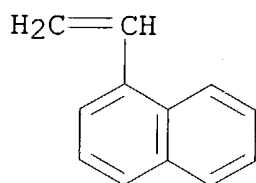


RN 396098-38-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 826-74-4

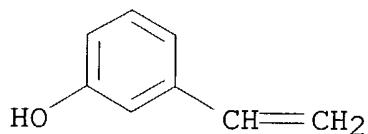
CMF C12 H10



CM 2

CRN 620-18-8

CMF C8 H8 O

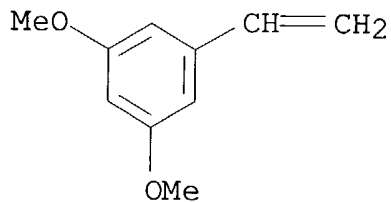


RN 477705-24-1 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-3,5-dimethoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 40243-87-6

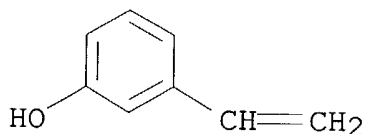
CMF C10 H12 O2



CM 2

CRN 620-18-8

CMF C8 H8 O



IT 338445-31-1 437652-81-8

(photoacid; neg.-working **resist** compn. contg. alicyclic
compd. for x-ray and electron beam)

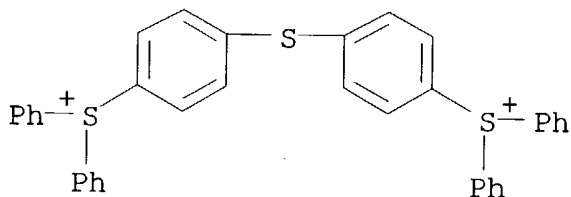
RN 338445-31-1 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA
INDEX NAME)

CM 1

CRN 74227-34-2

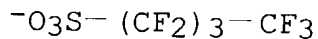
CMF C36 H28 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



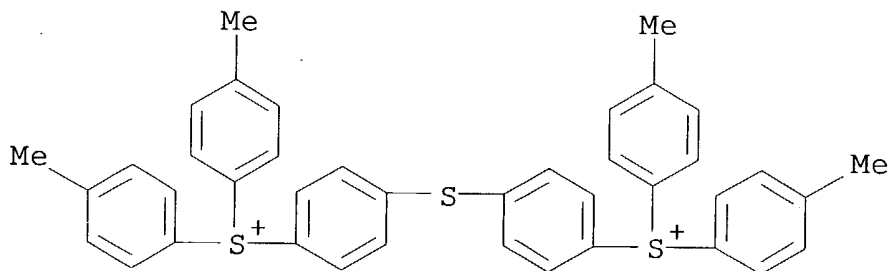
RN 437652-81-8 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with
1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafuoro-1-
decanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 222722-48-7

CMF C40 H36 S3



CM 2

CRN 126105-34-8

CMF C10 F21 O3 S

 $^{-}O_3S-(CF_2)_9-CF_3$

IC ICM G03F007-038

ICS C07C031-137; C07C035-31; C07C035-37; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 24

ST **resist** compn contg alicyclic compd x ray electron beamIT Electron beam **resists****Photoresists****Resists****X-ray resists**(neg.-working **resist** compn. contg. alicyclic compd. for x-ray and electron beam)

IT 80-04-6 87-89-8, myo-Inositol 98-52-2 100-97-0, uses
 479-59-4 **484-47-9** 529-32-8 556-48-9,
 1,4-Cyclohexanediol 668-94-0 707-37-9 768-95-6,
 Tricyclo[3.3.1.1^{3,7}]decan-1-ol 775-64-4 824-13-5 1194-21-4
 1194-44-1, Bicyclo[2.2.2]octane-1,4-diol 1632-68-4,
 Bicyclo[2.2.1]heptan-2-ol 2041-15-8, 1,3,5-Cyclohexanetriol
3001-72-7 4975-73-9 4985-24-4 5001-18-3,
 Tricyclo[3.3.1.1^{3,7}]decane-1,3-diol 5807-14-7 6674-22-2
 10347-01-0 10385-78-1 20534-58-1, Bicyclo[2.2.2]octan-1-ol
24979-69-9, 3-Hydroxystyrene homopolymer **24979-70-2**
 , p-Hydroxystyrene homopolymer **24979-74-6**,
 4-Hydroxystyrene-styrene copolymer **24980-18-5**,
 o-Hydroxystyrene homopolymer 31818-42-5 34413-35-9 76921-55-6
 84030-20-6 145819-91-6 **149614-53-9**, 3-Hydroxystyrene-4-

Hydroxystyrene copolymer 161679-94-3 171429-59-7
 185502-14-1 321164-59-4 396098-38-7
 473273-00-6 477705-24-1

(neg.-working **resist** compn. contg. alicyclic compd. for
 x-ray and electron beam)

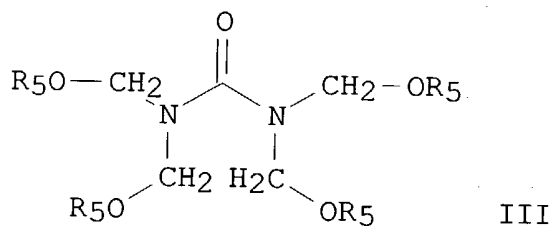
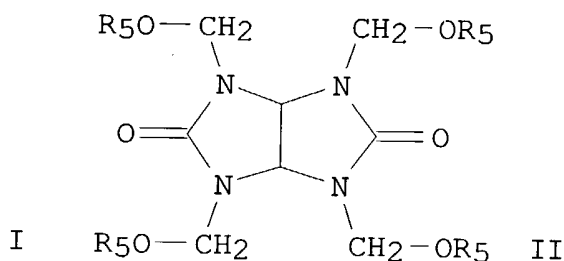
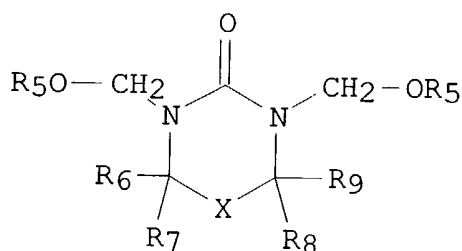
IT 241806-75-7 241806-76-8 258341-99-0 258872-05-8 312386-77-9
 338445-31-1 341548-86-5 343629-51-6 437652-80-7
 437652-81-8

(photoacid; neg.-working **resist** compn. contg. alicyclic
 compd. for x-ray and electron beam)

L46 ANSWER 8 OF 23 HCA COPYRIGHT 2004 ACS on STN

138:311556 Negative-working **resist** composition for x-ray and
 electronic beam. Takahashi, Omote; Yasunami, Shoichiro; Adegawa,
 Yutaka (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho
 JP 2003107704 A2(20030409), 41 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 2001-301492 20010928.

GI



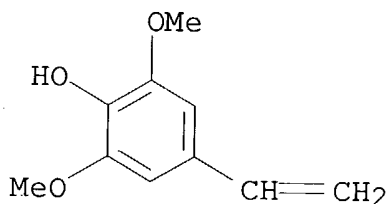
AB The neg.-working **resist** compn. comprises (a) a photoacid,
 (b) a crosslinker activated by an acid, and (c) an alkali-sol. resin
 represented by $[H_2C-CR_0(L-C_6R_1R_2R_3R_4OH)]$ ($R_0 = H, Me$; $L =$ divalent
 bonding group; and $R_1-4 =$ alkyl, alkoxy, acetoxy, etc.). The
 crosslinker may be represented by I, II, or III ($R_5 = H, alkyl$,

acyl; R6-9 = H, OH, alky, etc.; and X = single bond, methylene, O).
The compn. further contains a basic compd.

IT 508220-50-6 508220-51-7 508220-54-0
508220-58-4 508220-61-9 508220-62-0
508220-64-2 508220-66-4 508220-68-6
(alkali-sol. resin; neg.-working **resist** compn. for
x-ray and electronic beam)
RN 508220-50-6 HCA
CN Phenol, 4-ethenyl-2,6-dimethoxy-, polymer with 4-ethenylphenol (9CI)
(CA INDEX NAME)

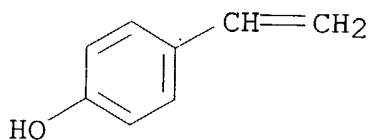
CM 1

CRN 28343-22-8
CMF C10 H12 O3



CM 2

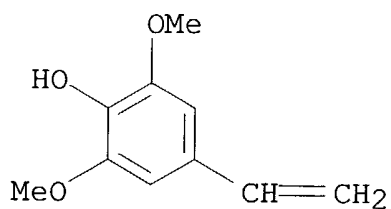
CRN 2628-17-3
CMF C8 H8 O



RN 508220-51-7 HCA
CN Phenol, 4-ethenyl-2,6-dimethoxy-, polymer with 3-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

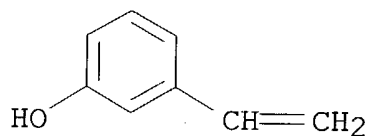
CRN 28343-22-8
CMF C10 H12 O3



CM 2

CRN 620-18-8

CMF C8 H8 O



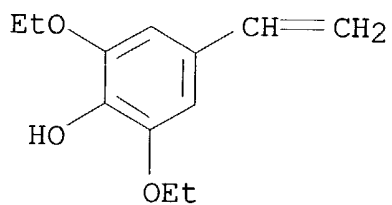
RN 508220-54-0 HCA

CN Phenol, 4-ethenyl-2,6-diethoxy-, polymer with 4-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

CRN 508220-53-9

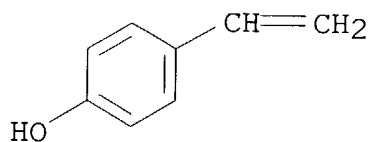
CMF C12 H16 O3



CM 2

CRN 2628-17-3

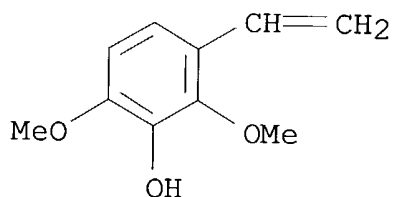
CMF C8 H8 O



RN 508220-58-4 HCA
CN Phenol, 3-ethenyl-2,6-dimethoxy-, polymer with 4-ethenylphenol (9CI)
(CA INDEX NAME)

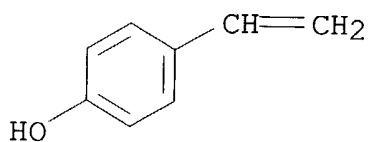
CM 1

CRN 508220-55-1
CMF C10 H12 O3



CM 2

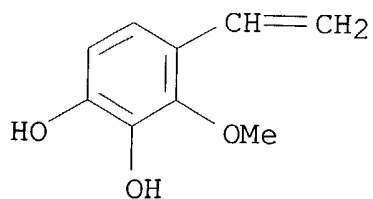
CRN 2628-17-3
CMF C8 H8 O



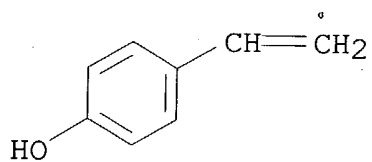
RN 508220-61-9 HCA
CN 1,2-Benzenediol, 4-ethenyl-3-methoxy-, polymer with 4-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

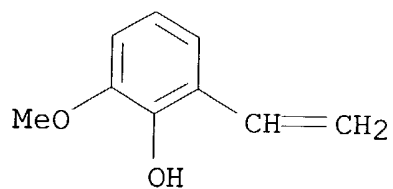
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CMF C9 H10 O3



CM 2

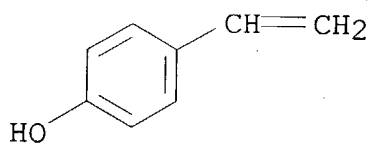
CRN 2628-17-3
CMF C8 H8 ORN 508220-62-0 HCA
CN Phenol, 2-ethenyl-6-methoxy-, polymer with 4-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

CRN 120550-69-8
CMF C9 H10 O2

CM 2

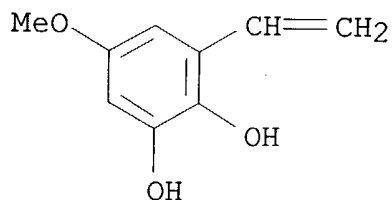
CRN 2628-17-3
CMF C8 H8 O



RN 508220-64-2 HCA
 CN 1,2-Benzenediol, 3-ethenyl-5-methoxy-, polymer with 4-ethenylphenol
 (9CI) (CA INDEX NAME)

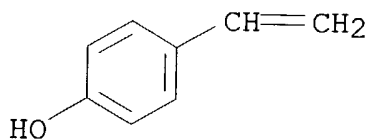
CM 1

CRN 508220-63-1
 CMF C9 H10 O3



CM 2

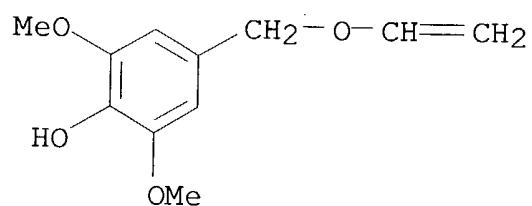
CRN 2628-17-3
 CMF C8 H8 O



RN 508220-66-4 HCA
 CN Phenol, 4-[(ethenyloxy)methyl]-2,6-dimethoxy-, polymer with
 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

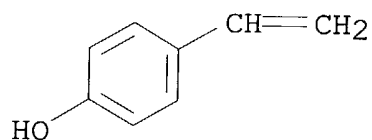
CRN 508220-65-3
 CMF C11 H14 O4



CM 2

CRN 2628-17-3

CMF C8 H8 O



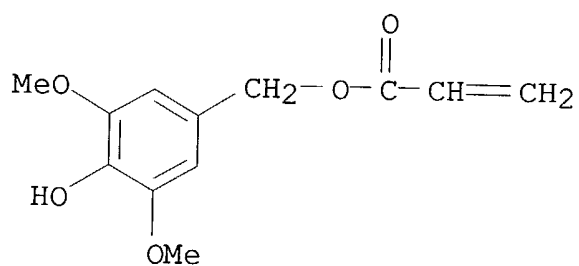
RN 508220-68-6 HCA

CN 2-Propenoic acid, (4-hydroxy-3,5-dimethoxyphenyl)methyl ester,
polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 508220-67-5

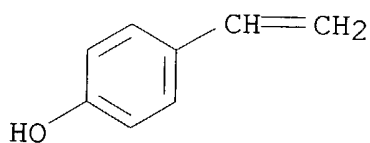
CMF C12 H14 O5



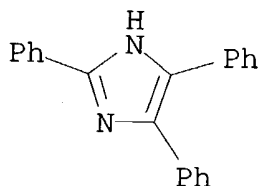
CM 2

CRN 2628-17-3

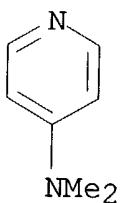
CMF C8 H8 O



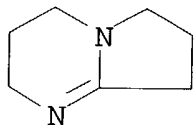
IT **484-47-9, 2,4,5-Triphenylimidazole 1122-58-3,**
4-Dimethylaminopyridine 3001-72-7
 (basic compd.; neg.-working **resist** compn. for x-ray and
 electronic beam)
 RN 484-47-9 HCA
 CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 1122-58-3 HCA
 CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
 CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
 (CA INDEX NAME)



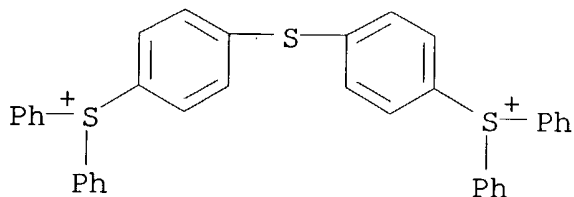
IT **338445-31-1 437652-81-8**
 (photoacid; neg.-working **resist** compn. for x-ray and
 electronic beam)
 RN 338445-31-1 HCA
 CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with

1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

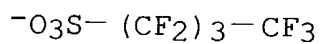
CMF C36 H28 S3



CM 2

CRN 45187-15-3

CMF C4 F9 O3 S



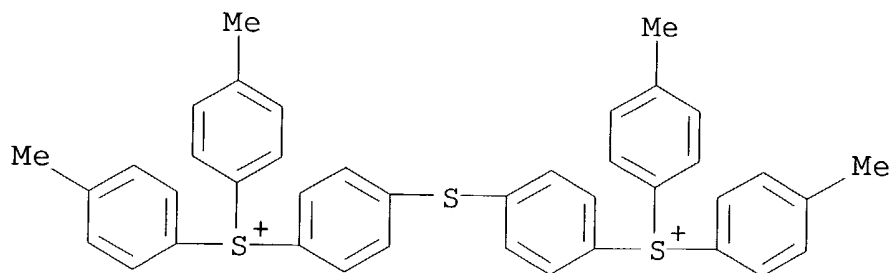
RN 437652-81-8 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafuoro-1-decanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 222722-48-7

CMF C40 H36 S3



CM 2

CRN 126105-34-8
CMF C10 F21 O3 S

$^{-}O_3S-(CF_2)_9-CF_3$

IC ICM G03F007-038
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 25, 38
ST x ray electron beam **resist** compn; photoacid crosslinker
alkali sol resin basic compd **resist** compn
IT Electron beam **resists**
X-ray **resists**
(neg.-working **resist** compn. for x-ray and electronic
beam)
IT 31872-14-7 508220-50-6 508220-51-7 508220-52-8
508220-54-0 508220-56-2 508220-58-4
508220-61-9 508220-62-0 508220-64-2
508220-66-4 508220-68-6
(alkali-sol. resin; neg.-working **resist** compn. for
x-ray and electronic beam)
IT 100-97-0, Hexamethylenetetramine, uses 110-89-4, Piperidine, uses
280-48-8, 1,3-Diazabicyclo[2.2.2]octane 484-47-9,
2,4,5-Triphenylimidazole 1122-58-3, 4-
Dimethylaminopyridine 3001-72-7 24544-04-5,
2,6-Diisopropylaniline 122936-95-2
(basic compd.; neg.-working **resist** compn. for x-ray and
electronic beam)
IT 5395-50-6 13747-15-4 17464-88-9 65952-06-9 508220-69-7
508220-70-0 508220-71-1
(crosslinker; neg.-working **resist** compn. for x-ray and
electronic beam)
IT 138529-81-4 138529-84-7 144317-44-2 240424-21-9 241806-75-7
241806-76-8 258341-99-0 258872-05-8 312386-77-9
338445-31-1 341548-86-5 343629-51-6 437652-80-7
437652-81-8
(photoacid; neg.-working **resist** compn. for x-ray and
electronic beam)
IT 244057-73-6P
(prepn. of photoacid for neg.-working **resist** compn.)
IT 79-30-1, Iso-butyric acid chloride 123-30-8, p-Aminophenol
127-09-3, Sodium acetate 110726-28-8, Trisp-PA
(prepn. of photoacid for neg.-working **resist** compn.)

L46 ANSWER 9 OF 23 HCA COPYRIGHT 2004 ACS on STN
138:47316 Negative-working **resist** composition for

semiconductor device fabrication. Yasunami, Shoichiro; Takahashi, Omote; Adegawa, Yutaka (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002372783 A2 (20021226, 39 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-182117 20010615.

AB The compn. comprises (A) a compd. generating acid by actinic ray or radiation, (B) an alkali-sol. resin, (C) a crosslinking agent which crosslinks the resin by the action of an acid, and (D) a compd. having both .gtoreq.1 carboxyl group and .gtoreq.1 secondary or tertiary alicyclic amino group. The compn. shows high sensitivity and resoln., gives clear rectangular patterns, and is useful for semiconductor device fabrication.

IT 270563-96-7 349619-88-1 389859-77-2

(acid generator; neg. resist contg. alkali-sol. resin, crosslinking agent, and compd. having amino and carboxyl groups)

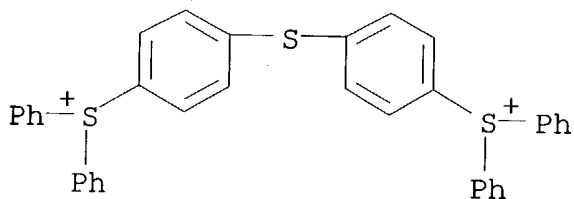
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

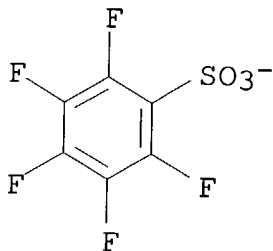
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



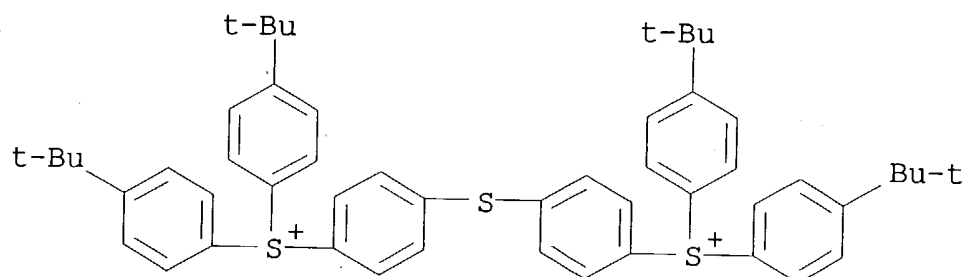
RN 349619-88-1 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(1,1-dimethylethyl)phenyl]-, salt with 4-fluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 343629-56-1

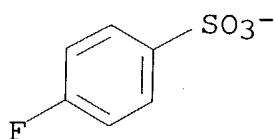
CMF C52 H60 S3



CM 2

CRN 61657-38-3

CMF C6 H4 F O3 S



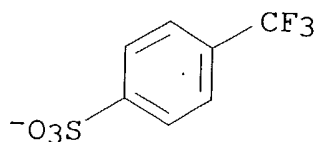
RN 389859-77-2 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl]-, salt with 4-(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 120998-63-2

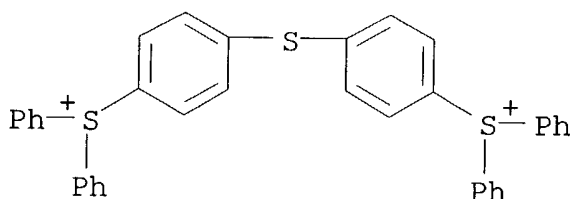
CMF C7 H4 F3 O3 S



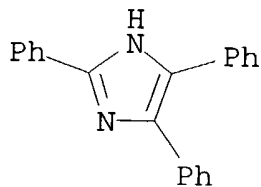
CM 2

CRN 74227-34-2

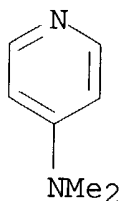
CMF C36 H28 S3



IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3,
 4-Dimethylaminopyridine
 (basic compd.; neg. **resist** contg. alkali-sol. resin,
 crosslinking agent, and compd. having amino and carboxyl groups)
 RN 484-47-9 HCA
 CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



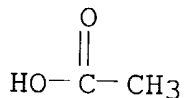
RN 1122-58-3 HCA
 CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



IT 130501-59-6P, Poly(p-hydroxystyrene) acetate
 (neg. **resist** contg. alkali-sol. resin, crosslinking
 agent, and compd. having amino and carboxyl groups)
 RN 130501-59-6 HCA
 CN Phenol, 4-ethenyl-, homopolymer, acetate (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7
CMF C2 H4 O2

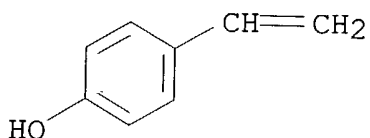


CM 2

CRN 24979-70-2
CMF (C8 H8 O)x
CCI PMS

CM 3

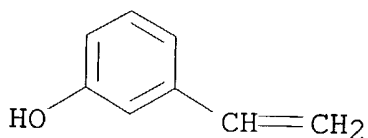
CRN 2628-17-3
CMF C8 H8 O



IT 24979-69-9, Poly(m-hydroxystyrene) 24979-70-2,
Poly(p-hydroxystyrene) 149614-53-9, m-Hydroxystyrene-p-
hydroxystyrene copolymer 345212-59-1 396098-38-7
473313-51-8 478918-37-5 478918-38-6
(neg. resist contg. alkali-sol. resin, crosslinking
agent, and compd. having amino and carboxyl groups)
RN 24979-69-9 HCA
CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8
CMF C8 H8 O

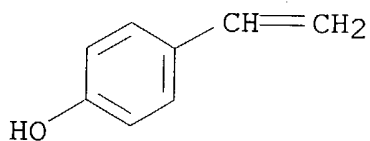


RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



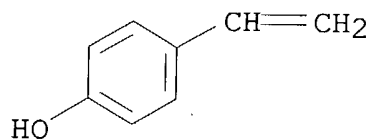
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

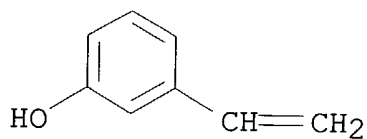
CMF C8 H8 O



CM 2

CRN 620-18-8

CMF C8 H8 O



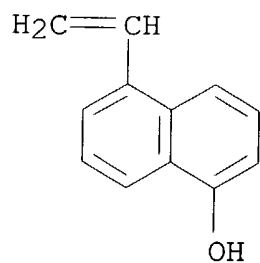
RN 345212-59-1 HCA

CN 1-Naphthalenol, 5-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-58-0

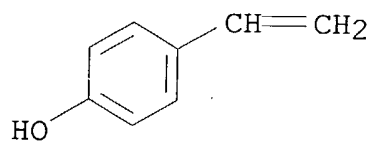
CMF C12 H10 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



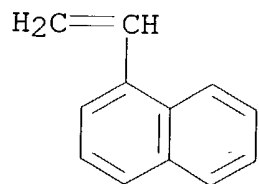
RN 396098-38-7 HCA

CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 826-74-4

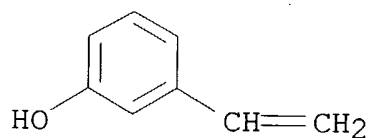
CMF C12 H10



CM 2

CRN 620-18-8

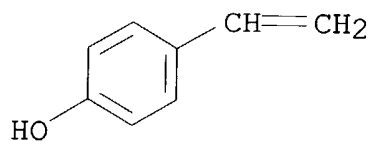
CMF C8 H8 O



RN 473313-51-8 HCA
 CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene and 4-ethenylphenol (9CI) (CA INDEX NAME)

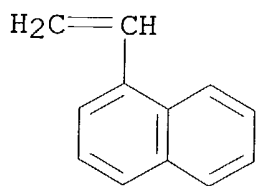
CM 1

CRN 2628-17-3
 CMF C8 H8 O



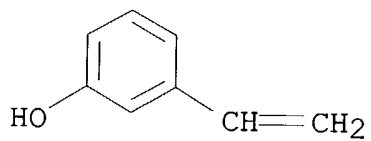
CM 2

CRN 826-74-4
 CMF C12 H10



CM 3

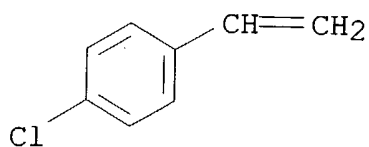
CRN 620-18-8
 CMF C8 H8 O



RN 478918-37-5 HCA
CN Phenol, 3-ethenyl-, polymer with 1-chloro-4-ethenylbenzene (9CI)
(CA INDEX NAME)

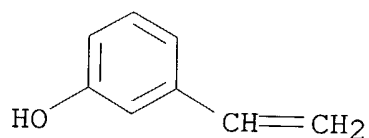
CM 1

CRN 1073-67-2
CMF C8 H7 Cl



CM 2

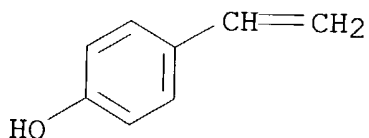
CRN 620-18-8
CMF C8 H8 O



RN 478918-38-6 HCA
CN 2-Propenoic acid, phenylmethyl ester, polymer with 4-ethenylphenol
(9CI) (CA INDEX NAME)

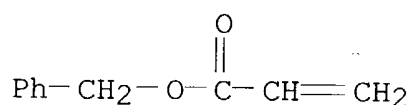
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 2495-35-4
CMF C10 H10 O2



- IC ICM G03F007-038
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST neg **resist** alkali soluble resin crosslinking agent;
resist amino carboxyl compd; semiconductor device
fabrication radiation **resist**
- IT Semiconductor device fabrication
(neg. **resist** contg. alkali-sol. resin, crosslinking
agent, and compd. having amino and carboxyl groups for
semiconductor device fabrication)
- IT **Resists**
(radiation-sensitive, neg.; neg. **resist** contg.
alkali-sol. resin, crosslinking agent, and compd. having amino
and carboxyl groups)
- IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate
(acid generator; neg. **resist** contg. alkali-sol. resin,
crosslinking agent, and compd. having amino and carboxyl groups)
- IT 270563-92-3 270563-93-4 **270563-96-7** 279244-39-2
349619-88-1 389859-77-2
(acid generator; neg. **resist** contg. alkali-sol. resin,
crosslinking agent, and compd. having amino and carboxyl groups)
- IT 51-17-2, Benzoimidazole **484-47-9**, 2,4,5-Triphenylimidazole
1122-58-3, 4-Dimethylaminopyridine 5622-97-9
(basic compd.; neg. **resist** contg. alkali-sol. resin,
crosslinking agent, and compd. having amino and carboxyl groups)
- IT 161679-94-3P
(crosslinking agent; neg. **resist** contg. alkali-sol.
resin, crosslinking agent, and compd. having amino and carboxyl
groups)
- IT 3089-11-0 32449-09-5 185502-14-1 185502-15-2 197087-74-4
(crosslinking agent; neg. **resist** contg. alkali-sol.
resin, crosslinking agent, and compd. having amino and carboxyl
groups)
- IT 51-35-4, 4-Hydroxyproline 147-85-3, L-Proline, uses 475-11-6,
N-Methylproline 498-94-2, Isonipecotic acid 498-95-3, Nipecotic
acid 535-75-1, Pipecolic acid 567-36-2, 3-Hydroxyproline
609-36-9, Proline 2762-32-5, 2-Piperazinecarboxylic acid
7730-87-2
(neg. **resist** contg. alkali-sol. resin, crosslinking
agent, and compd. having amino and carboxyl groups)
- IT **130501-59-6P**, Poly(p-hydroxystyrene) acetate

173786-80-6DP, 4-Acetoxystyrene-4-methoxystyrene copolymer, hydrolyzed 258341-98-9P 349647-07-0P, Acrylonitrile-2-hydroxyethyl acrylate-2-[(4'-hydroxyphenyl)carbonyloxy]ethyl methacrylate copolymer

(neg. **resist** contg. alkali-sol. resin, crosslinking agent, and compd. having amino and carboxyl groups)

IT 24979-69-9, Poly(m-hydroxystyrene) 24979-70-2, Poly(p-hydroxystyrene) 149614-53-9, m-Hydroxystyrene-p-hydroxystyrene copolymer 219838-71-8, Poly(3,5-dihydroxystyrene) 345212-59-1 396098-38-7 473313-51-8 478918-36-4 478918-37-5 478918-38-6

(neg. **resist** contg. alkali-sol. resin, crosslinking agent, and compd. having amino and carboxyl groups)

L46 ANSWER 10 OF 23 HCA COPYRIGHT 2004 ACS on STN

137:331074 Electron beam or x-ray negative-working **resist** composition. Takahashi, Akira; Adegawa, Yutaka (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002311586 A2 20021023, 73 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-119723 20010418.

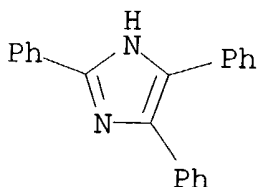
AB The title **resists** compn. comprises (a) a sulfonium salt or iodonium salt having .gtoreq.1 Ph group capable of generating an acid upon receiving electron beam or x-ray, (b) an alk. sol. resin, (c) a crosslinker working on the resin upon reaction with an acid, and (d) a compd. which cleaves itself and/or in other components by receiving electron beam or x-ray but not forming Ph radical as an intermediate. The **resist** compn. further contains a N-contg. basic compd. and a surfactant. The **resist** compn. exhibited high sensitivity under high acceleration voltage conditions.

IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-Dimethylaminopyridine 3001-72-7, 1,5-Diazabicyclo[4.3.0]non-5-ene 24979-69-9 149614-53-9 345212-28-4 349647-01-4 396098-38-7 420131-94-8 420131-95-9 420131-96-0 420131-98-2

(electron beam or x-ray neg.-working **resist** compn.)

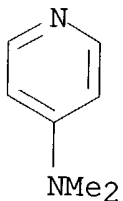
RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

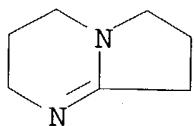


RN 1122-58-3 HCA

CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA

CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)

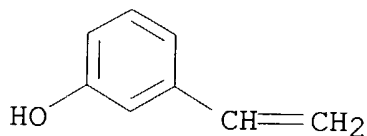
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



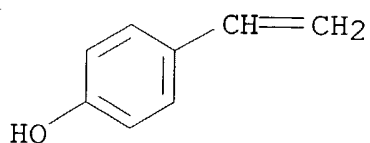
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

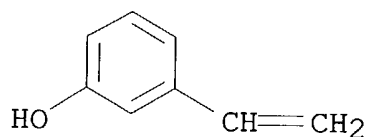
CMF C8 H8 O



CM 2

CRN 620-18-8

CMF C8 H8 O



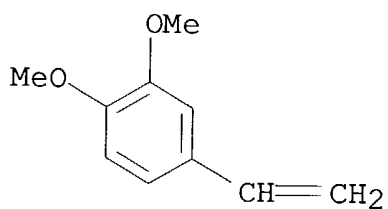
RN 345212-28-4 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenyl-1,2-dimethoxybenzene
(9CI) (CA INDEX NAME)

CM 1

CRN 6380-23-0

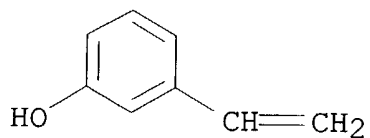
CMF C10 H12 O2



CM 2

CRN 620-18-8

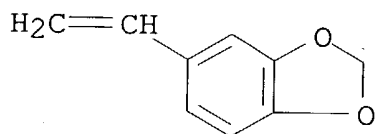
CMF C8 H8 O



RN 349647-01-4 HCA
CN Phenol, 3-ethenyl-, polymer with 5-ethenyl-1,3-benzodioxole (9CI)
(CA INDEX NAME)

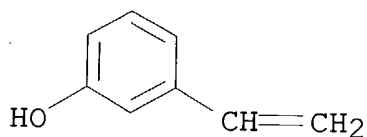
CM 1

CRN 7315-32-4
CMF C9 H8 O2



CM 2

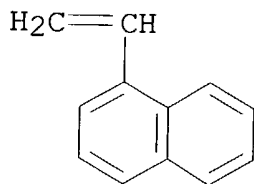
CRN 620-18-8
CMF C8 H8 O



RN 396098-38-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

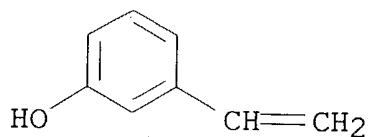
CRN 826-74-4
CMF C12 H10



CM 2

CRN 620-18-8

CMF C8 H8 O



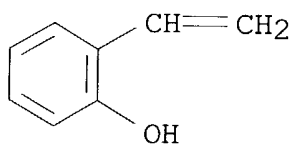
RN 420131-94-8 HCA

CN Phenol, 2-ethenyl-, polymer with 3-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 695-84-1

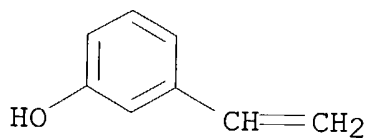
CMF C8 H8 O



CM 2

CRN 620-18-8

CMF C8 H8 O



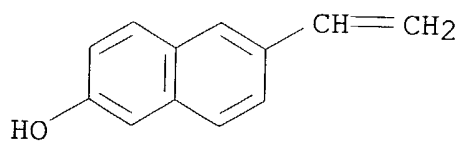
RN 420131-95-9 HCA

CN 2-Naphthalenol, 6-ethenyl-, polymer with 3-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 136896-92-9

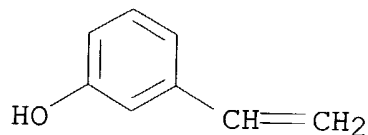
CMF C12 H10 O



CM 2

CRN 620-18-8

CMF C8 H8 O



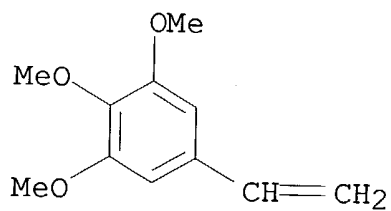
RN 420131-96-0 HCA

CN Phenol, 3-ethenyl-, polymer with ethenylbenzene and
5-ethenyl-1,2,3-trimethoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 13400-02-7

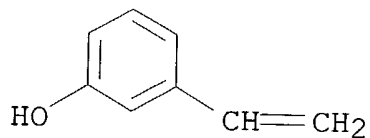
CMF C11 H14 O3



CM 2

CRN 620-18-8

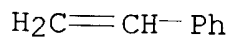
CMF C8 H8 O



CM 3

CRN 100-42-5

CMF C8 H8



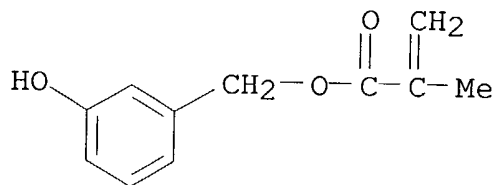
RN 420131-98-2 HCA

CN 2-Propenoic acid, 2-methyl-, (3-hydroxyphenyl)methyl ester, polymer
with 3-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 420131-97-1

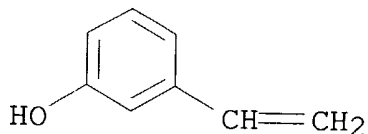
CMF C11 H12 O3



CM 2

CRN 620-18-8

CMF C8 H8 O



IT 270563-96-7 343629-55-0 437652-81-8

(photoacid; electron beam or x-ray neg.-working resist
compn.)

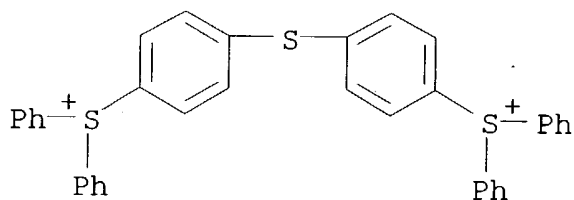
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

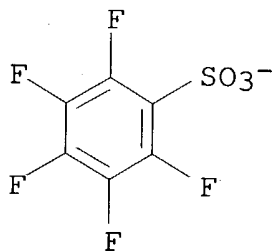
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



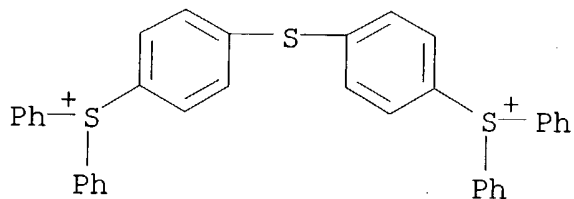
RN 343629-55-0 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-1-octanesulfonic
acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

CMF C36 H28 S3



CM 2

CRN 45298-90-6

CMF C8 F17 O3 S

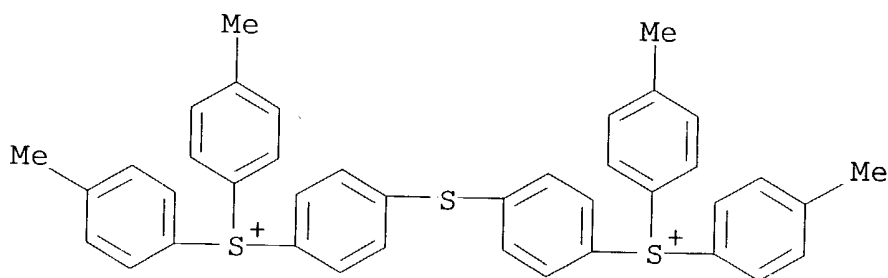
 $^{-}O_3S-(CF_2)_7-CF_3$

RN 437652-81-8 HCA
 CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with
 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafuoro-1-
 decanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 222722-48-7

CMF C40 H36 S3



CM 2

CRN 126105-34-8

CMF C10 F21 O3 S

 $^{-}O_3S-(CF_2)_9-CF_3$

IC ICM G03F007-038
 ICS H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38, 46
 ST electron beam x ray neg **resist** compn; sulfonium iodonium
 salt x ray neg **resist** compn; crosslinker fluorosurfactant
 surfactant **resist** compn
 IT Electron beam **resists**
 Surfactants
 X-ray **resists**
 (electron beam or x-ray neg.-working **resist** compn.)
 IT Surfactants
 (fluorosurfactants; electron beam or x-ray neg.-working

- resist compn.)**
- IT Polysiloxanes, uses
(surfactant; electron beam or x-ray neg.-working **resist** compn.)
- IT 161679-94-3P 162846-57-3P
(crosslinker; electron beam or x-ray neg.-working **resist** compn.)
- IT 3089-11-0 32449-09-5 185502-14-1 185502-15-2 197087-74-4
(crosslinker; electron beam or x-ray neg.-working **resist** compn.)
- IT 100-97-0, uses 110-89-4, Piperidine, uses 121-44-8,
Triethylamine, uses 134-81-6 280-42-2, 2,6-
Diazabicyclo[2.2.2]octane **484-47-9**, 2,4,5-
Triphenylimidazole 947-19-3 **1122-58-3**,
4-Dimethylaminopyridine 1592-43-4 1707-68-2 2002-16-6,
Phenylguanidine **3001-72-7**, 1,5-Diazabicyclo[4.3.0]non-5-
ene 6652-29-5 10373-78-1 24544-04-5 24650-42-8
24979-69-9 26060-56-0 32238-84-9 41556-26-7,
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate 55048-40-3
68400-54-4 68688-54-0 69432-40-2 71868-10-5 75980-60-8
79044-56-7 119137-03-0 121912-68-3 122936-95-2,
1,8-Diazabicyclo[4.3.0]non-5-ene 137909-39-8 **149614-53-9**
258341-98-9 **345212-28-4** **349647-01-4**
396098-38-7 **420131-94-8** **420131-95-9**
420131-96-0 **420131-98-2** 473542-90-4
473542-93-7 473542-96-0
(electron beam or x-ray neg.-working **resist** compn.)
- IT 144317-44-2 153698-46-5 197447-16-8 241806-76-8 258341-99-0
258872-05-8 **270563-96-7** 312386-77-9 343629-51-6
343629-55-0 437652-80-7 **437652-81-8**
473542-95-9
(photoacid; electron beam or x-ray neg.-working **resist** compn.)
- IT 110726-28-8, Trisp-PA
(prepn. of crosslinker for electron beam or x-ray neg.-working **resist** compn.)
- IT 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate
97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 108-94-1,
Cyclohexanone, uses 110-43-0, 2-Heptanone 123-86-4, Butyl
acetate 1320-67-8, Propylene glycol monomethyl ether 84540-57-8,
Propylene glycol monomethyl ether acetate 98516-33-7, Propylene
glycol monomethyl ether propionate
(solvent; electron beam or x-ray neg.-working **resist** compn.)
- IT 25852-90-8 137462-24-9, Megafac F176 216679-67-3, Megafac R08
(surfactant; electron beam or x-ray neg.-working **resist** compn.)

L46 ANSWER 11 OF 23 HCA COPYRIGHT 2004 ACS on STN

137:317936 Electron beam or x-ray negative-working chemical amplification-type **resist** composition. Takahashi, Omote; Shirakawa, Hiroshi; Adekawa, Yutaka (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002311584 A2 20021023, 67 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-112874 20010411.

AB The tittle **resist** compn. comprises (a) a photoacid, (b) an alk. sol. resin, (c) a compd. contg. .gtoreq.1 ring structure subjected to ring-opening addn. reaction. The tittle **resist** compn. further contains a crosslinker, a surfactant and a N-contg. basic compd.

IT 343629-55-0 437652-81-8

(electron beam or x-ray neg.-working chem. amplification-type **resist** compn. from)

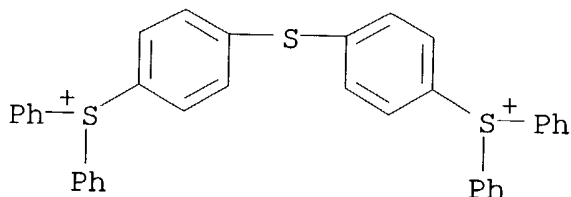
RN 343629-55-0 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

CMF C36 H28 S3



CM 2

CRN 45298-90-6

CMF C8 F17 O3 S

$^{-}O_3S-(CF_2)_7-CF_3$

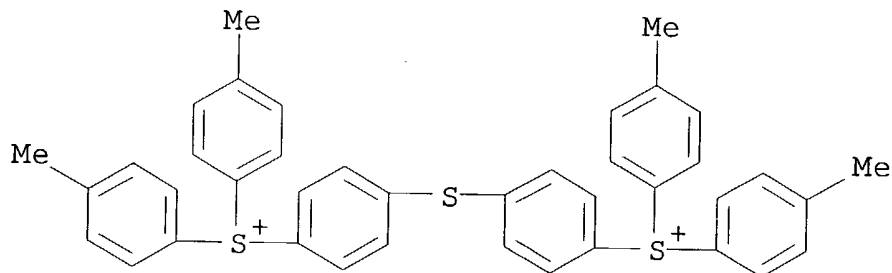
RN 437652-81-8 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafuoro-1-decanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 222722-48-7

CMF C40 H36 S3



CM 2

CRN 126105-34-8

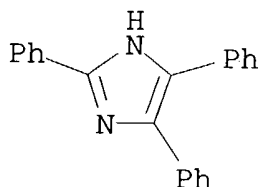
CMF C10 F21 O3 S

 $^{-}O_3S-(CF_2)_9-CF_3$

IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7
 24979-69-9, 3-Hydroxystyrene homopolymer 24979-70-2
 , 4-Hydroxystyrene homopolymer 24979-74-6,
 4-Hydroxystyrene-styrene copolymer 24980-18-5,
 2-Hydroxystyrene homopolymer 149614-53-9,
 3-Hydroxystyrene-4-Hydroxystyrene copolymer 171429-59-7,
 4-Acetoxystyrene-4-hydroxystyrene copolymer 321164-59-4
 396098-38-7 473272-98-9, 3,4,5-Trihydroxystyrene-4-
 hydroxystyrene copolymer 473272-99-0, 3,5-Dihydroxystyrene-
 4-hydroxystyrene copolymer
 (electron beam or x-ray neg.-working chem. amplification-type
 resist compn. from)

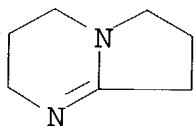
RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA

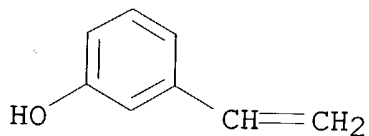
CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
 (CA INDEX NAME)



RN 24979-69-9 HCA
CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

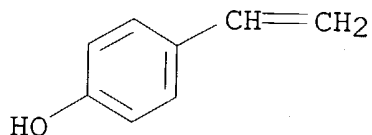
CRN 620-18-8
CMF C8 H8 O



RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

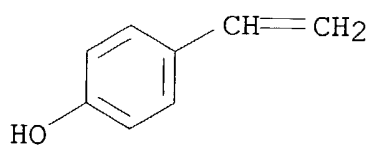
CRN 2628-17-3
CMF C8 H8 O



RN 24979-74-6 HCA
CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

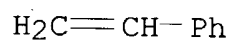
CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



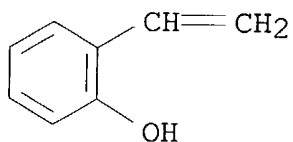
RN 24980-18-5 HCA

CN Phenol, 2-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 695-84-1

CMF C8 H8 O



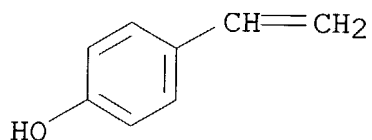
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

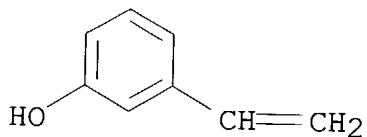
CRN 2628-17-3

CMF C8 H8 O



CM 2

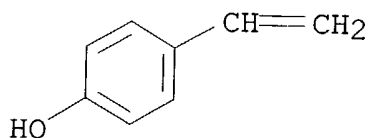
CRN 620-18-8
CMF C8 H8 O



RN 171429-59-7 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate (9CI) (CA
INDEX NAME)

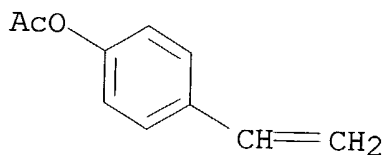
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

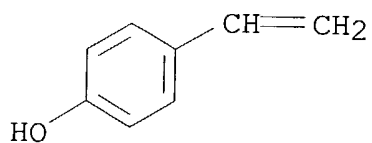
CRN 2628-16-2
CMF C10 H10 O2



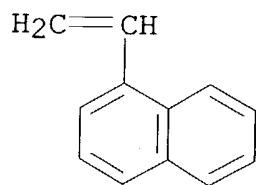
RN 321164-59-4 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

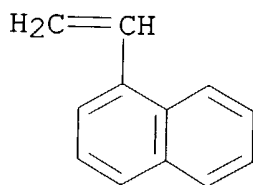
CRN 2628-17-3
CMF C8 H8 O



CM 2

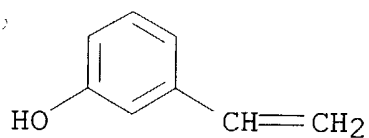
CRN 826-74-4
CMF C12 H10RN 396098-38-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethynyl-naphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 826-74-4
CMF C12 H10

CM 2

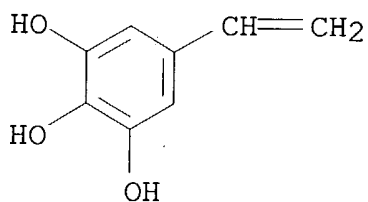
CRN 620-18-8
CMF C8 H8 O



RN 473272-98-9 HCA
CN 1,2,3-Benzenetriol, 5-ethenyl-, polymer with 4-ethenylphenol (9CI)
(CA INDEX NAME)

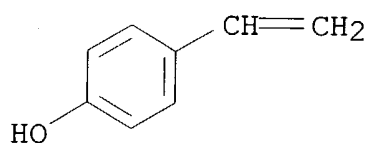
CM 1

CRN 106209-29-4
CMF C8 H8 O3



CM 2

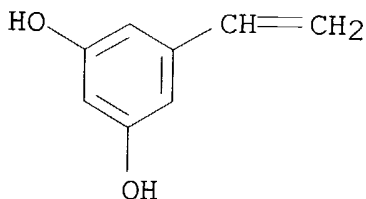
CRN 2628-17-3
CMF C8 H8 O



RN 473272-99-0 HCA
CN 1,3-Benzenediol, 5-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

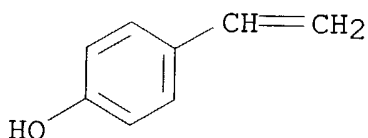
CRN 113231-14-4
CMF C8 H8 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



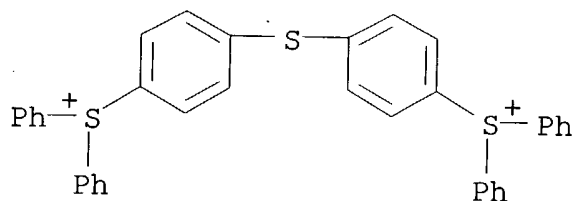
- IC ICM G03F007-038
ICS G03F007-004; H01L021-027; C07C039-15; C07C043-178
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 46
- ST electron beam neg chem amplification **resist** compn; x ray
neg chem amplification **resist** compn
- IT Electron beam **resists**
(electron beam neg.-working chem. amplification-type **resist** compn.)
- IT Surfactants
(electron beam or x-ray neg.-working chem. amplification-type **resist** compn. from)
- IT Polysiloxanes, uses
(electron beam or x-ray neg.-working chem. amplification-type **resist** compn. from)
- IT Polyoxyalkylenes, uses
(tri-Ph ether; electron beam or x-ray neg.-working chem. amplification-type **resist** compn. from)
- IT X-ray **resists**
(x-ray neg.-working chem. amplification-type **resist** compn. from)
- IT 138529-81-4 138529-84-7 144317-44-2 240424-21-9 241806-75-7
241806-76-8 258341-99-0 258872-05-8 312386-77-9 341548-86-5
343629-51-6 **343629-55-0** 437652-80-7 **437652-81-8**
(electron beam or x-ray neg.-working chem. amplification-type **resist** compn. from)

- IT 75-21-8, Oxirane, uses 100-97-0, uses 109-99-9, uses 120-93-4,
2-Imidazolidinone **484-47-9**, 2,4,5-Triphenylimidazole
1675-54-3 2002-16-6, Phenylguanidine 2451-62-9 2455-24-5
3001-72-7 3089-11-0 13236-02-7 17557-23-2
24544-04-5, 2,6-Diisopropylaniline **24979-69-9**,
3-Hydroxystyrene homopolymer **24979-70-2**, 4-Hydroxystyrene
homopolymer **24979-74-6**, 4-Hydroxystyrene-styrene copolymer
24980-18-5, 2-Hydroxystyrene homopolymer 25068-38-6
25322-68-3D, tri-Ph ether 66072-38-6 93164-56-8 97052-23-8
109185-69-5 122936-95-2 137462-24-9, Megafac F176
149614-53-9, 3-Hydroxystyrene-4-Hydroxystyrene copolymer
161679-94-3 162846-57-3 168537-35-7 **171429-59-7**,
4-Acetoxystyrene-4-hydroxystyrene copolymer 185502-14-1
185502-15-2 197087-74-4 216679-67-3, Megafac R08
321164-59-4 396098-38-7 473272-98-9,
3,4,5-Trihydroxystyrene-4-hydroxystyrene copolymer
473272-99-0, 3,5-Dihydroxystyrene-4-hydroxystyrene copolymer
473273-00-6
(electron beam or x-ray neg.-working chem. amplification-type
resist compn. from)
- L46 ANSWER 12 OF 23 HCA COPYRIGHT 2004 ACS on STN
137:177116 Electron beam or x-ray negative-working **resist**
composition. Mizutani, Kazuyoshi; Adegawa, Yutaka (Fuji Photo Film
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002236364 A2
20020823, 22 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
2001-32878 20010208.
- AB The compn. contains (A) an alkali-sol. resin, (B) an acid generator,
(C) a phenol deriv. (m.w. .ltoreq.2000) having 3-10 benzene rings in
a mol. and .gtoreq.1 each hydroxymethyl and alkoxyethyl groups
connecting to the benzene ring and crosslinks by the action of acid,
(D) an org. basic compd., and (E) .gtoreq.1 propylene glycol
monoalkyl ether carboxylate and .gtoreq.1 selected from propylene
glycol monoalkyl ether, alkyl lactate, alkyl akloxypropionate,
.gamma.-butyrolactone, ethylene carbonate, and propylene carbonate
as solvents. The compn. can be uniformly coated and development
defect is prevented. A group: Propylene glycol mono alkylether
carboxylate b group: Propylene glycol mono alkylether, lactic acid
alkyl and alkoxy propionic acid alkyl c group: -butyrolactone,
ethylene carbonate and propylene carbonate.
- IT **270563-96-7 270563-98-9**
(acid generator; neg. **resist** compn. contg. alkali-sol.
resin, acid generator, crosslinking agent, org. base, and
solvent)
- RN 270563-96-7 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

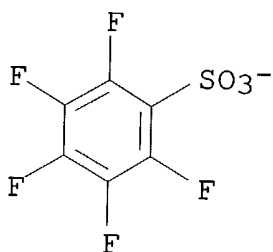
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 03 S



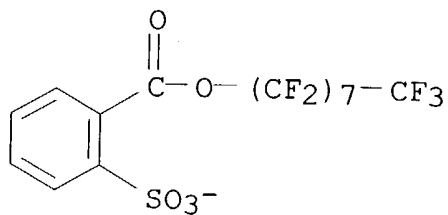
RN 270563-98-9 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with 1-(heptadecafluorooctyl) 2-sulfobenzoate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 270563-97-8

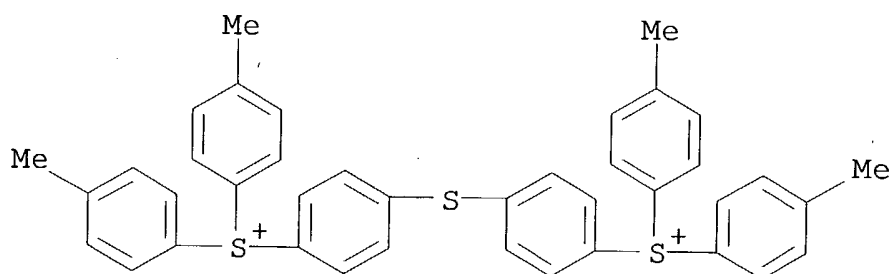
CMF C15 H4 F17 05 S



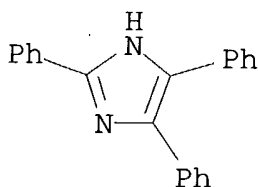
CM 2

CRN 222722-48-7

CMF C40 H36 S3



IT 484-47-9, 2,4,5-Triphenylimidazole
 (base; neg. **resist** compn. contg. alkali-sol. resin,
 acid generator, crosslinking agent, org. base, and solvent)
 RN 484-47-9 HCA
 CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

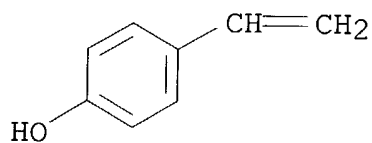


IT 24979-70-2, Poly(p-hydroxystyrene)
 (neg. **resist** compn. contg. alkali-sol. resin, acid
 generator, crosslinking agent, org. base, and solvent)
 RN 24979-70-2 HCA
 CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-038

- ICS C07C025-18; C07C381-12; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
ST electron beam x ray neg **resist**; alkali soluble resin acid
generator **resist**; org base solvent crosslinking agent
resist
IT Electron beam **resists**
(neg. **resist** compn. contg. alkali-sol resin, acid
generator, crosslinking agent, org. base, and solvent)
IT X-ray **resists**
(neg. **resist** compn. contg. alkali-sol. resin, acid
generator, crosslinking agent, org. base, and solvent)
IT Phenolic resins, uses
(novolak; neg. **resist** compn. contg. alkali-sol. resin,
acid generator, crosslinking agent, org. base, and solvent)
IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate
258341-98-9P
(acid generator; neg. **resist** compn. contg. alkali-sol.
resin, acid generator, crosslinking agent, org. base, and
solvent)
IT 66003-78-9, Triphenylsulfonium triflate 270563-92-3 270563-93-4
270563-96-7 270563-98-9 279244-45-0
(acid generator; neg. **resist** compn. contg. alkali-sol.
resin, acid generator, crosslinking agent, org. base, and
solvent)
IT 484-47-9, 2,4,5-Triphenylimidazole
(base; neg. **resist** compn. contg. alkali-sol. resin,
acid generator, crosslinking agent, org. base, and solvent)
IT 162846-57-3DP, Me ethers
(crosslinking agent; neg. **resist** compn. contg.
alkali-sol. resin, acid generator, crosslinking agent, org. base,
and solvent)
IT 161679-95-4D, Me ethers 161679-97-6D, Me ethers 161679-98-7D, Me
ethers 197087-73-3D, Me ethers
(crosslinking agent; neg. **resist** compn. contg.
alkali-sol. resin, acid generator, crosslinking agent, org. base,
and solvent)
IT 24979-70-2, Poly(p-hydroxystyrene) 27029-76-1,
m-Cresol-p-cresol-formaldehyde copolymer
(neg. **resist** compn. contg. alkali-sol. resin, acid
generator, crosslinking agent, org. base, and solvent)
IT 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate
97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 763-69-9
1320-67-8, Propylene glycol monomethyl ether 84540-57-8, Propylene
glycol monomethyl ether acetate 98516-33-7, Propylene glycol
monomethyl ether propionate
(solvent; neg. **resist** compn. contg. alkali-sol. resin,

acid generator, crosslinking agent, org. base, and solvent)

L46 ANSWER 13 OF 23 HCA COPYRIGHT 2004 ACS on STN

137:13263 Positive-working electron beam or x-ray **resist** compositions using specific combination of solvents. Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002162733 A2 20020607, 62 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-357804 20001124.

AB The **resist** compns., which show good pattern profile, high sensitivity and resolu., and good stabilities to post coating delay and post exposure delay, contain (a) compds. which generate acids upon irradiation with **radiation**, (b) cationically **polymerizable** compds., and (c) solvents comprising .gtoreq.1 selected from (A) chain ketones and .gtoreq.1 selected from (B) alkyl lactates, alkyl alkoxypropionates, acetate esters, propylene glycol monoalkyl ethers and/or (C) .gamma.-butyrolactone, ethylene carbonate, and propylene carbonate. The compns. may addnl. contain (d) org. basic compds. and (e) F-contg. surfactants and/or silicone surfactants.

IT 24979-70-2DP, VP 8000, reaction products with vinyl ethers
288620-13-3DP, reaction products with poly(p-hydroxystyrene)
(binder; pos.-working electron beam or x-ray **resist**
compns. contg. cationically-polymerizable monomers and .gtoreq.2 solvents)

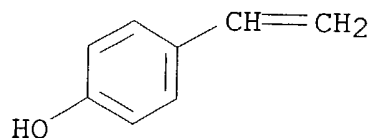
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



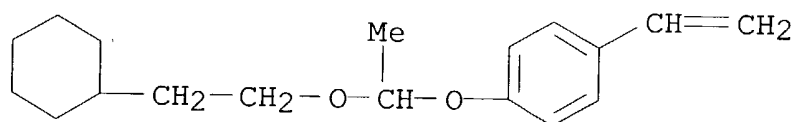
RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

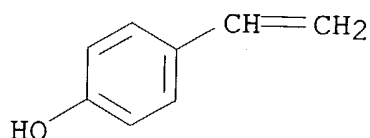
CMF C18 H26 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IT 24979-70-2, VP 8000 142952-62-3,
 p-(tert-Butoxycarbonylmethoxy)styrene-p-hydroxystyrene copolymer
 147625-42-1, Poly(p-hydroxystyrene) tert-butyl carbonate
 177984-03-1 422508-76-7 433289-14-6
 (binder; pos.-working electron beam or x-ray **resist**
 compns. contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)

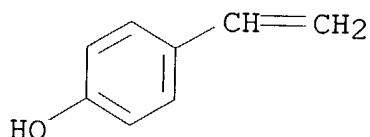
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



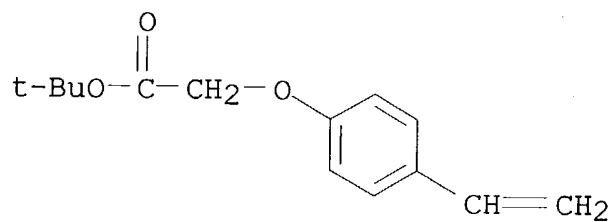
RN 142952-62-3 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer
 with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

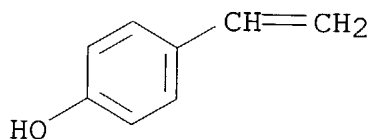
CMF C14 H18 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



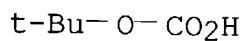
RN 147625-42-1 HCA

CN Phenol, 4-ethenyl-, homopolymer, 1,1-dimethylethyl carbonate (9CI)
(CA INDEX NAME)

CM 1

CRN 51300-90-4

CMF C5 H10 O3



CM 2

CRN 24979-70-2

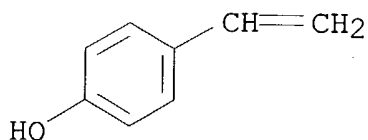
CMF (C8 H8 O) x

CCI PMS

CM 3

CRN 2628-17-3

CMF C8 H8 O



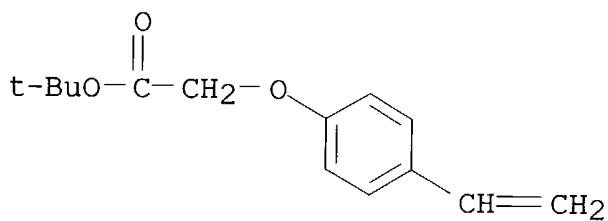
RN 177984-03-1 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

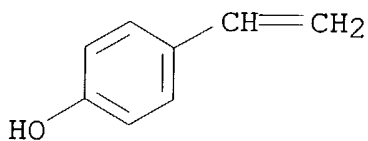
CMF C14 H18 O3



CM 2

CRN 2628-17-3

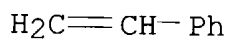
CMF C8 H8 O



CM 3

CRN 100-42-5

CMF C8 H8



RN 422508-76-7 HCA

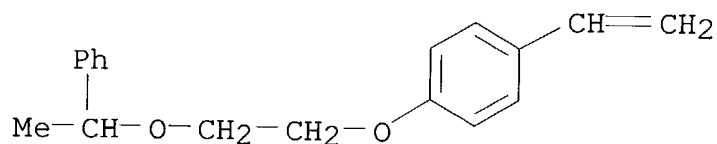
CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and

1-ethenyl-4-[2-(1-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 422508-75-6

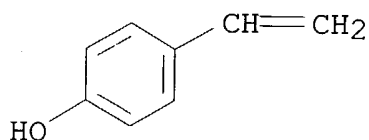
CMF C18 H20 O2



CM 2

CRN 2628-17-3

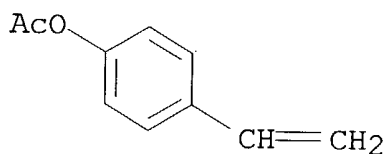
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



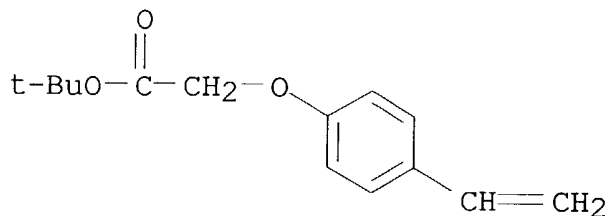
RN 433289-14-6 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with 3-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

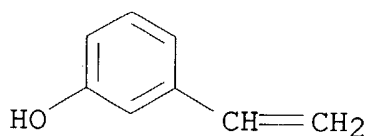
CMF C14 H18 O3



CM 2

CRN 620-18-8

CMF C8 H8 O



IT 270563-96-7P

(pos.-working electron beam or x-ray **resist** compns.
contg. cationically-polymerizable monomers and .gtoreq.2
solvents)

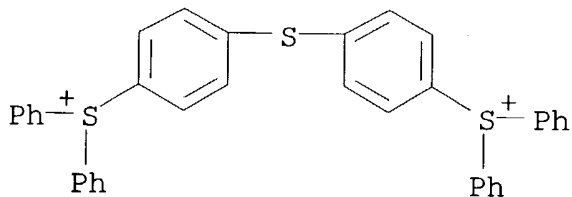
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

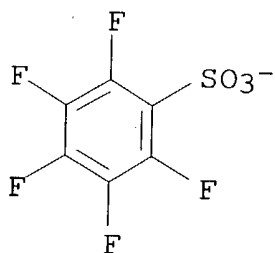
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



IT 279244-43-8 389859-77-2

(pos.-working electron beam or x-ray **resist** compns.
contg. cationically-polymerizable monomers and .gtoreq.2
solvents)

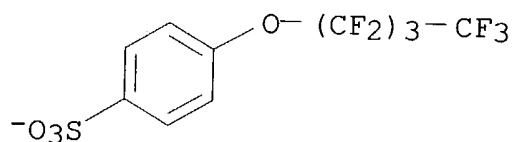
RN 279244-43-8 HCA

CN Sulfonium, (oxydi-4,1-phenylene)bis[diphenyl-, salt with
4-(nonafluorobutoxy)benzenesulfonic acid (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 279244-42-7

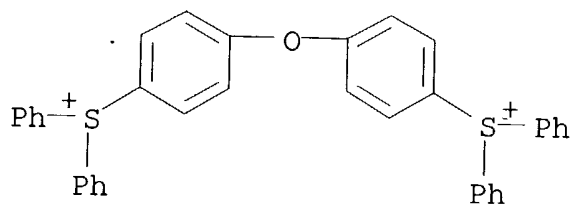
CMF C10 H4 F9 O4 S



CM 2

CRN 279244-41-6

CMF C36 H28 O S2



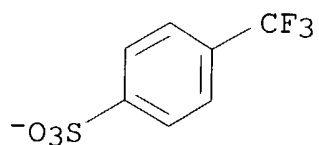
RN 389859-77-2 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
4-(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 120998-63-2

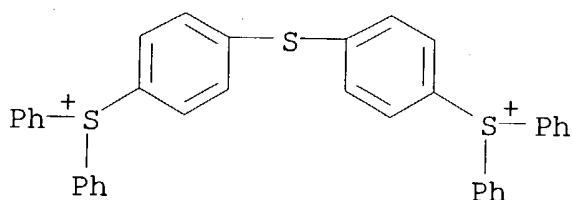
CMF C7 H4 F3 O3 S



CM 2

CRN 74227-34-2

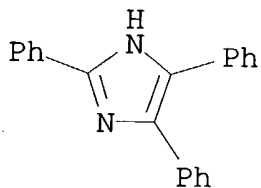
CMF C36 H28 S3



IT 484-47-9, 2,4,5-Triphenylimidazole
 (pos.-working electron beam or x-ray **resist** compns.
 contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)

RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)ST pos x ray **resist** solvent combination; electron beam pos
resist solvent combination; ketone lactate ester solvent pos

x ray **resist**; cationically polymerizable monomer pos x ray
resist; cyclohexyl vinyl ether pos electron beam
resist

- IT Ketones, uses
 (chain; pos.-working electron beam or x-ray **resist**
 compns. contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT Surfactants
 (fluorine-contg. or siloxanes; pos.-working electron beam or
 x-ray **resist** compns. contg. cationically-polymerizable
 monomers and .gtoreq.2 solvents)
- IT Solvents
 (pos.-working electron beam or x-ray **resist** compns.
 contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT Electron beam **resists**
 X-ray **resists**
 (pos.-working; pos.-working electron beam or x-ray **resist**
 compns. contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT Polysiloxanes, uses
 (surfactants; pos.-working electron beam or x-ray **resist**
 compns. contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT 109-92-2DP, Ethyl vinyl ether, reaction products with
 poly(p-hydroxystyrene) **24979-70-2DP**, VP 8000, reaction
 products with vinyl ethers 31814-77-4DP, 2-Phenylethyl vinyl
 ether, reaction products with poly(p-hydroxystyrene) 95418-59-0DP,
 p-tert-Butoxystyrene-styrene copolymer, hydrolyzed 212555-24-3DP,
 4-Cyclohexylphenoxyethyl vinyl ether, reaction products with
 poly(p-hydroxystyrene) **288620-13-3DP**, reaction products
 with poly(p-hydroxystyrene)
 (binder; pos.-working electron beam or x-ray **resist**
 compns. contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT **24979-70-2**, VP 8000 **142952-62-3**,
 p-(tert-Butoxycarbonylmethoxy)styrene-p-hydroxystyrene copolymer
147625-42-1, Poly(p-hydroxystyrene) tert-butyl carbonate
 160309-96-6D, p-Acetoxystyrene-tert-butyl methacrylate copolymer,
 hydrolyzed **177984-03-1 422508-76-7**
433289-14-6
 (binder; pos.-working electron beam or x-ray **resist**
 compns. contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT 110-87-2, 3,4-Dihydro-2H-pyran 5292-43-3, tert-Butyl bromoacetate
 76937-83-2, .alpha.,.alpha.,.alpha.',.alpha.',.alpha.',.alpha.',-
 Hexakis(4-hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8,
 1-[.alpha.-Methyl-.alpha.-(4'-hydroxyphenyl)ethyl]-4-

- [.alpha.',.alpha.'-bis(4''-hydroxyphenyl)ethyl]benzene
 148452-55-5, 1,3,3,5-Tetrakis(4-hydroxyphenyl)pentane 153698-47-6,
 Cumyl bromoacetate
 (dissoln. inhibitor from; pos.-working electron beam or x-ray
resist compns. contg. cationically-polymerizable monomers
 and .gtoreq.2 solvents)
- IT 153698-63-6P 153698-69-2P 196709-88-3P 433289-15-7P
 (dissoln. inhibitor; pos.-working electron beam or x-ray
resist compns. contg. cationically-polymerizable monomers
 and .gtoreq.2 solvents)
- IT 65-85-0, Benzoic acid, reactions
 (esterification with chloroethyl vinyl ether; pos.-working
 electron beam or x-ray **resist** compns. contg.
 cationically-polymerizable monomers and .gtoreq.2 solvents)
- IT 1131-60-8, p-Cyclohexylphenol
 (in binder polymer prepn.; apos.-working electron beam or x-ray
resist compns. contg. cationically-polymerizable monomers
 and .gtoreq.2 solvents)
- IT 110-75-8, 2-Chloroethyl vinyl ether
 (in binder polymer prepn.; pos.-working electron beam or x-ray
resist compns. contg. cationically-polymerizable monomers
 and .gtoreq.2 solvents)
- IT 3744-08-9P, Triphenylsulfonium iodide
 (in prepn. of photoacid generator; pos.-working electron beam or
 x-ray **resist** compns. contg. cationically-polymerizable
 monomers and .gtoreq.2 solvents)
- IT 71-43-2, Benzene, reactions 75-59-2, Tetramethylammonium hydroxide
 832-53-1, Pentafluorobenzenesulfonyl chloride 945-51-7,
 Diphenylsulfoxide 2049-95-8, tert-Amylbenzene 4270-70-6,
 Triphenylsulfonium chloride
 (in prepn. of photoacid generator; pos.-working electron beam or
 x-ray **resist** compns. contg. cationically-polymerizable
 monomers and .gtoreq.2 solvents)
- IT 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate
 (photoacid generator; pos.-working electron beam or x-ray
resist compns. contg. cationically-polymerizable monomers
 and .gtoreq.2 solvents)
- IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate
 258341-98-9P 270563-93-4P **270563-96-7P**
 (pos.-working electron beam or x-ray **resist** compns.
 contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT 270563-92-3 **279244-43-8** 279244-45-0 **389859-77-2**
 398457-16-4 405893-16-5
 (pos.-working electron beam or x-ray **resist** compns.
 contg. cationically-polymerizable monomers and .gtoreq.2
 solvents)
- IT 41440-39-5P

(pos.-working electron beam or x-ray **resist** compns.
contg. cationically-polymerizable monomers and .gtoreq.2
solvents)

IT **484-47-9**, 2,4,5-Triphenylimidazole

(pos.-working electron beam or x-ray **resist** compns.
contg. cationically-polymerizable monomers and .gtoreq.2
solvents)

IT 50-21-5D, Lactic acid, alkyl esters 57-55-6D, Propylene glycol,
monoalkyl ethers 79-33-4D, alkyl esters 96-48-0,
.gamma.-Butyrolactone 96-49-1, Ethylene carbonate 97-64-3, Ethyl
lactate 108-32-7, Propylene carbonate 110-43-0, 2-Heptanone
123-86-4, Butyl acetate 502-44-3, .epsilon.-Caprolactone
763-69-9, Ethyl 3-ethoxypropionate 765-14-0 929-37-3
1320-67-8, Propylene glycol monomethyl ether 2182-55-0 4223-11-4
25085-99-8, Epikote 825 26256-87-1, 2,5,8,11-Tetraoxatridec-12-ene
50856-25-2 92268-17-2 160768-40-1 212555-24-3

(pos.-working electron beam or x-ray **resist** compns.
contg. cationically-polymerizable monomers and .gtoreq.2
solvents)

L46 ANSWER 14 OF 23 HCA COPYRIGHT 2004 ACS on STN

136:393268 Positive-working **resist** compositions containing
sulfonic acid generators. Kodama, Kunihiko; Nishiyama, Fumiyuki
(Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP
2002139838 A2 (20020517, 44 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 2000-332802 20001031.

AB The compns., which show high sensitivity, high resoln., and improved
process latitude, and give **resist** pattern with good
rectangular profile, contain (a) compds. which generate sulfonic
acids having alkyl group substituted with .gtoreq.1 F upon irradiation
with actinic ray and (b) resins having a repeating unit
[CH₂CHR₁(C₆H₄OCR₂R₃OR)] [R₁ = H, alkyl, halo; R₂, R₃ = H, alkyl; R =
(un)substituted C.gtoeq.5 alicyclic hydrocarbyl, (un)substituted
C.gtoeq.6 aryl, (un)substituted C.gtoeq.4 heterocyclyl, (CH₂)_nXR₄
(n = 1-3; X = direct bond, linking group; R₄ = any group given for
R); .gtoreq.2 of R, R₂, and R₃ may be bonded together to form a
ring] which are decomposed by acids and show increased sol. in an alk.
developer. The compns. may additionally contain (c) dissolution inhibitors
with mol. wt. .ltoreq.3000 which have acid-decomposable group and
show increased dissolution rate in an alk. developer upon action of
acids, (d) N-containing basic compds. and/or basic onium salts, and (e)
F-containing surfactants and/or silicone surfactants.

IT **338445-31-1P**

(pos.-working **resist** compns. contg.
fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
having alicyclic or (hetero)arom. group)

RN 338445-31-1 HCA

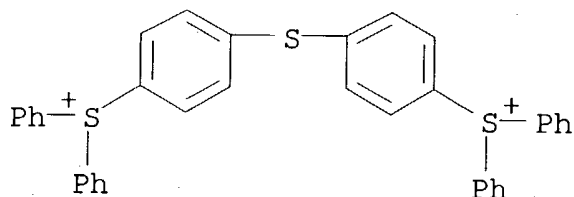
CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with

1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

CMF C36 H28 S3



CM 2

CRN 45187-15-3

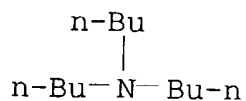
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

IT 102-82-9P, Tri-n-butylamine 24979-70-2DP, VP 8000, reaction products with cyclohexaneethanol, tert-Bu vinyl ether, and 147625-42-1P, Poly(p-hydroxystyrene) tert-butyl carbonate 158593-28-3P, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer 159296-87-4DP, tert-Butyl acrylate-p-vinylphenol copolymer, reaction products with iso-Bu vinyl ether 159296-87-4P, tert-Butyl acrylate-p-vinylphenol copolymer 199432-81-0P 199432-82-1P, p-Hydroxystyrene-p-(1-isobutoxyethoxy)styrene copolymer 200808-68-0P, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer 287381-58-2P 288620-15-5P, p-(1-Benzoyloxyethoxy)styrene-p-hydroxystyrene copolymer 289706-85-0P, p-Acetoxytyrene-p-hydroxystyrene-p-(1-phenethyloxyethoxy)styrene copolymer 325143-37-1P, p-tert-Butylstyrene-p-[1-(cyclohexylethoxy)ethoxy]styrene-p-hydroxystyrene copolymer 326592-04-5P 398457-05-1P 425671-10-9P, p-Acetoxytyrene-p-[1-(4-tert-butylcyclohexyl)carboxyethoxy]styrene-p-hydroxystyrene copolymer (pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)

RN 102-82-9 HCA

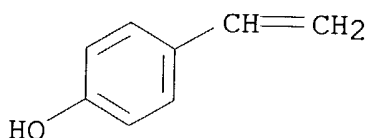
CN 1-Butanamine, N,N-dibutyl- (9CI) (CA INDEX NAME)



RN 24979-70-2 HCA
 CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

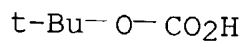
CRN 2628-17-3
 CMF C8 H8 O



RN 147625-42-1 HCA
 CN Phenol, 4-ethenyl-, homopolymer, 1,1-dimethylethyl carbonate (9CI)
 (CA INDEX NAME)

CM 1

CRN 51300-90-4
 CMF C5 H10 O3

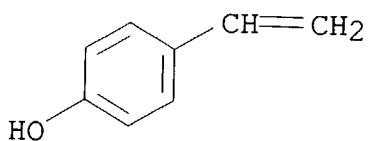


CM 2

CRN 24979-70-2
 CMF (C8 H8 O) x
 CCI PMS

CM 3

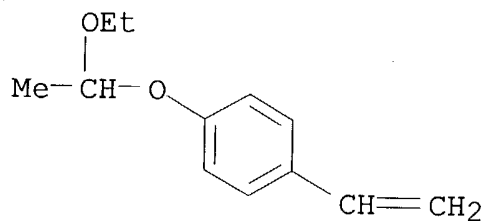
CRN 2628-17-3
 CMF C8 H8 O



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

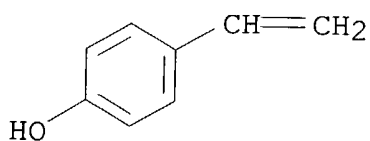
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

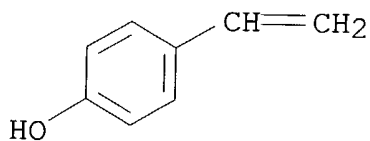
CRN 2628-17-3
CMF C8 H8 O



RN 159296-87-4 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

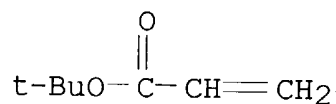
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

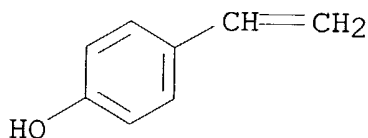
CRN 1663-39-4
CMF C7 H12 O2



RN 159296-87-4 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

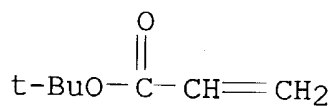
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

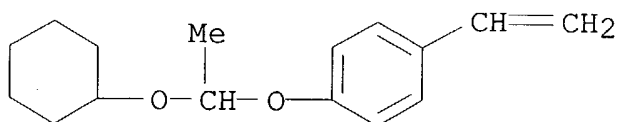
CRN 1663-39-4
CMF C7 H12 O2



RN 199432-81-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(cyclohexyloxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

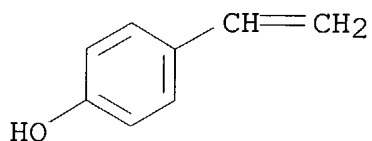
CRN 190434-67-4
CMF C16 H22 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



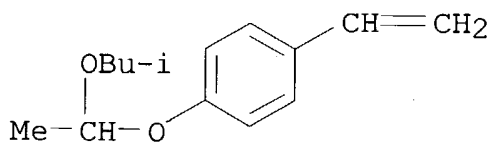
RN 199432-82-1 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 192314-53-7

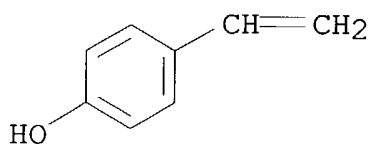
CMF C14 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 200808-68-0 HCA

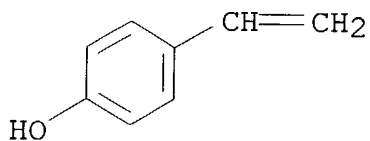
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with

ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

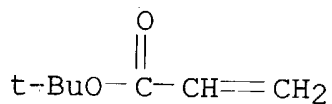
CMF C8 H8 O



CM 2

CRN 1663-39-4

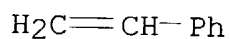
CMF C7 H12 O2



CM 3

CRN 100-42-5

CMF C8 H8



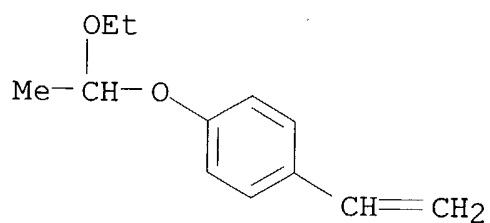
RN 287381-58-2 HCA

CN 2-Propenoic acid, cyclohexyl ester, polymer with
1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 157057-20-0

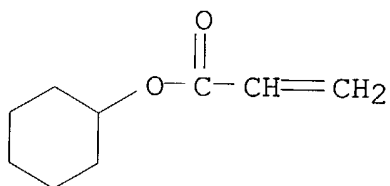
CMF C12 H16 O2



CM 2

CRN 3066-71-5

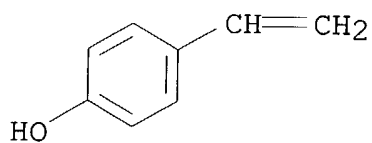
CMF C9 H14 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O

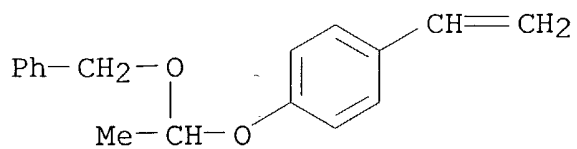


RN 288620-15-5 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-14-4

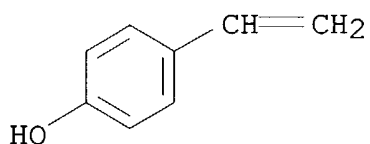
CMF C17 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



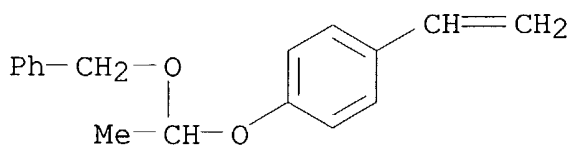
RN 289706-85-0 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-14-4

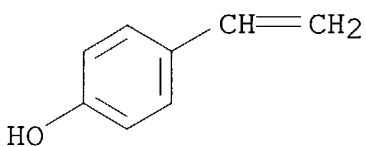
CMF C17 H18 O2



CM 2

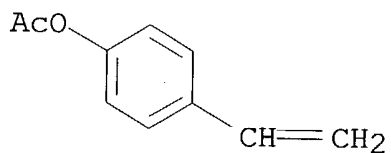
CRN 2628-17-3

CMF C8 H8 O



CM 3

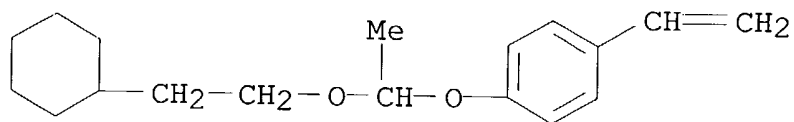
CRN 2628-16-2
CMF C10 H10 O2



RN 325143-37-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

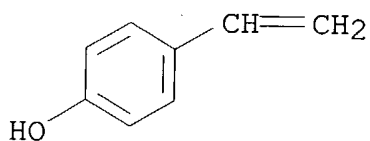
CM 1

CRN 288620-12-2
CMF C18 H26 O2



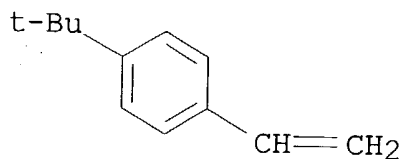
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

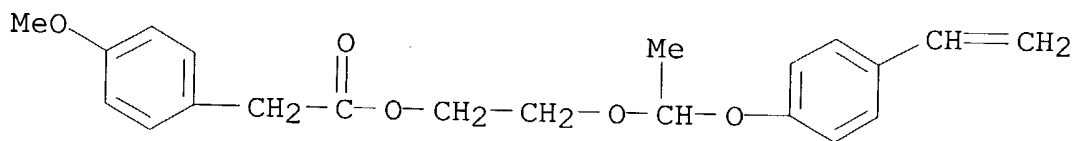
CRN 1746-23-2
CMF C12 H16



RN 326592-04-5 HCA
 CN Benzeneacetic acid, 4-methoxy-, 2-[1-(4-ethenylphenoxy)ethoxy]ethyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

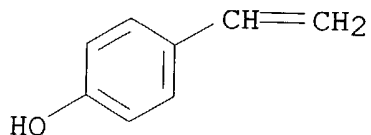
CM 1

CRN 326592-03-4
 CMF C21 H24 O5



CM 2

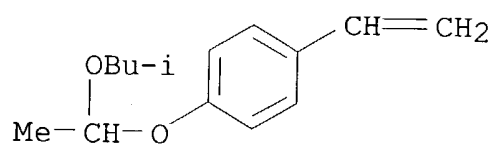
CRN 2628-17-3
 CMF C8 H8 O



RN 398457-05-1 HCA
 CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

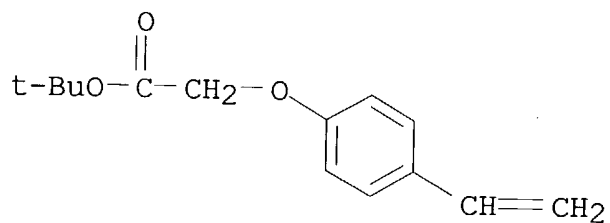
CRN 192314-53-7
 CMF C14 H20 O2



CM 2

CRN 142952-61-2

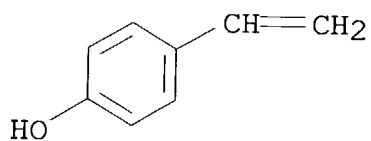
CMF C14 H18 O3



CM 3

CRN 2628-17-3

CMF C8 H8 O



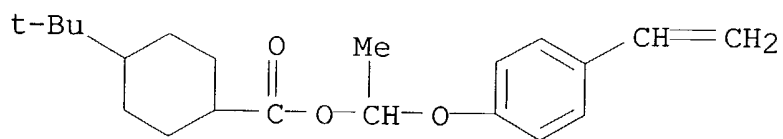
RN 425671-10-9 HCA

CN Cyclohexanecarboxylic acid, 4-(1,1-dimethylethyl)-, 1-(4-ethenylphenoxy)ethyl ester, polymer with 4-ethenylphenol and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 425671-09-6

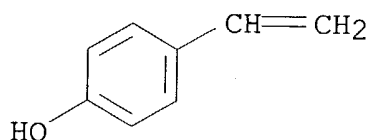
CMF C21 H30 O3



CM 2

CRN 2628-17-3

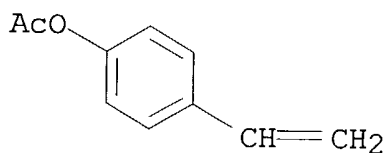
CMF C8 H8 O



CM 3

CRN 2628-16-2

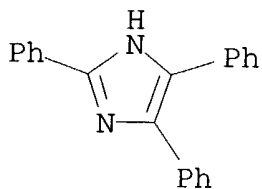
CMF C10 H10 O2



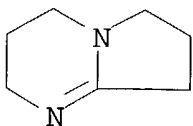
IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7,
 1,5-Diazabicyclo[4.3.0]-5-nonene
 (pos.-working **resist** compns. contg.
 fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
 having alicyclic or (hetero)arom. group)

RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
 CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
 (CA INDEX NAME)



IC ICM G03F007-039
 ICS C08F012-24; C08K005-42; C08L025-18; C08L083-04; G03F007-004;
 H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)

ST pos **resist** fluoroalkanesulfonic acid generator
 polyhydroxystyrene ether

IT Positive **photoresists**
 (UV, far-; pos.-working **resist** compns. contg.
 fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
 having alicyclic or (hetero)arom. group)

IT Electron beam **resists**
Resists
 (pos.-working; pos.-working **resist** compns. contg.
 fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
 having alicyclic or (hetero)arom. group)

IT 153698-63-6
 (dissoln. inhibitor; pos.-working **resist** compns. contg.
 fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
 having alicyclic or (hetero)arom. group)

IT 3744-08-9P, Triphenylsulfonium iodide
 (in prepn. of photoacid generator; pos.-working **resist**
 compns. contg. fluoroalkanesulfonic acid generators and
 poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)

IT 71-43-2, Benzene, reactions 945-51-7, Diphenyl sulfoxide
 1763-23-1, Perfluoro-n-octanesulfonic acid 4270-70-6,
 Triphenylsulfonium chloride 25628-17-5 52908-55-1 194999-85-4
 (in prepn. of photoacid generator; pos.-working **resist**
 compns. contg. fluoroalkanesulfonic acid generators and
 poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)

IT 14159-45-6P 39153-56-5P 138529-81-4P 138529-84-7P
 144089-15-6P, Triphenylsulfonium perfluorooctanesulfonate
 153698-46-5P 179419-32-0P 193345-23-2P 197447-16-8P
 241806-75-7P 252937-66-9P 297742-41-7P 338445-29-7P
338445-31-1P 365971-70-6P 365971-84-2P 365971-85-3P
 376357-77-6P 376357-89-0P 389859-76-1P 405284-05-1P
 425670-82-2P 425670-97-9P
 (pos.-working **resist** compns. contg.)

fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
having alicyclic or (hetero)arom. group)

IT 66003-78-9 144317-44-2 213740-80-8 241806-76-8 258872-05-8
284474-28-8 312386-77-9 391232-40-9 398141-17-8 398141-18-9
414911-27-6 414911-28-7 414911-33-4 425670-52-6 425670-55-9
425670-64-0 425670-70-8 425670-73-1 425670-76-4

(pos.-working **resist** compns. contg.

fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
having alicyclic or (hetero)arom. group)

IT 102-82-9P, Tri-n-butylamine 108-24-7DP, Acetic anhydride,
reaction products with poly(p-hydroxystyrene) ethers 109-53-5DP,
Isobutyl vinyl ether, reaction products with Bu acrylate-
hydroxystyrene copolymer 926-02-3DP, tert-Butyl vinyl ether,
reaction products with poly(hydroxystyrene) and cyclohexaneethanol
3040-44-6P, 1-Piperidineethanol 4442-79-9DP, Cyclohexaneethanol,
reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether
24979-70-2DP, VP 8000, reaction products with
cyclohexaneethanol, tert-Bu vinyl ether, and 147625-42-1P,
Poly(p-hydroxystyrene) tert-butyl carbonate 158593-28-3P,
p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer
159296-87-4DP, tert-Butyl acrylate-p-vinylphenol copolymer,
reaction products with iso-Bu vinyl ether 159296-87-4P,
tert-Butyl acrylate-p-vinylphenol copolymer 199432-81-0P
199432-82-1P, p-Hydroxystyrene-p-(1-isobutoxyethoxy)styrene
copolymer 200808-68-0P, tert-Butyl acrylate-p-
hydroxystyrene-styrene copolymer 287381-58-2P
288620-15-5P, p-(1-Benzoyloxyethoxy)styrene-p-hydroxystyrene
copolymer 289706-85-0P, p-Acetoxystyrene-p-hydroxystyrene-
p-(1-phenethyloxyethoxy)styrene copolymer 325143-37-1P,
p-tert-Butylstyrene-p-[1-(cyclohexylethoxy)ethoxy]styrene-p-
hydroxystyrene copolymer 326592-04-5P 398457-05-1P
425671-10-9P, p-Acetoxystyrene-p-[1-(4-tert-
butylcyclohexyl)carboxyethoxy]styrene-p-hydroxystyrene copolymer
(pos.-working **resist** compns. contg.

fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
having alicyclic or (hetero)arom. group)

IT 304-88-1, N-Benzoyl-N-phenylhydroxylamine 484-47-9,
2,4,5-Triphenylimidazole 3001-72-7, 1,5-
Diazabicyclo[4.3.0]-5-nonene 19600-49-8, Triphenylsulfonium
acetate

(pos.-working **resist** compns. contg.

fluoroalkanesulfonic acid generators and poly(hydroxystyrenes)
having alicyclic or (hetero)arom. group)

L46 ANSWER 15 OF 23 HCA COPYRIGHT 2004 ACS on STN

136:393265 Chemically-amplified negative-working **resist**
compositions containing radical generators. Adegawa, Yutaka (Fuji
Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002139836

A2 20020517, 83 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-336334 20001102.

AB The compns., which show high sensitivity, high resoln., rectangular pattern profile, and PCD (post coating delay) and PED (post exposure delay) stability, contain (a) compds. which directly or indirectly generate radicals upon irradiation with energy ray. The compns. may contain (b) compds. which generate acids upon irradiation with energy ray, (c) alkali-sol. resins, and (d) crosslinking agents reacting by acids.

IT 149614-53-9P 321164-59-4P 345212-27-3P
345212-28-4P 345212-30-8P 345212-36-4P
345212-54-6P 345212-55-7P 345212-56-8P
345212-60-4P 345212-61-5P 345212-63-7P
345212-64-8P 345212-67-1P 345212-69-3P
345212-71-7P 345212-73-9P 345212-74-0P
345212-77-3P 345212-78-4P 345212-80-8P
345212-86-4P 345212-89-7P 345212-91-1P
345212-92-2P 345212-93-3P 345212-95-5P
345212-97-7P 345212-99-9P 349619-43-8P
425422-26-0P 425422-30-6P 425422-38-4P
425422-40-8P 425422-53-3P 425422-59-9P
425422-62-4P 425422-65-7P 425422-68-0P

(alkali-sol. resin; chem.-amplified neg.-working resist compns. contg. compds. which generate radicals upon irradiation.)

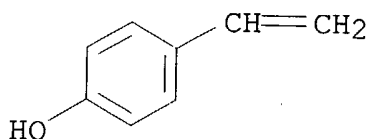
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

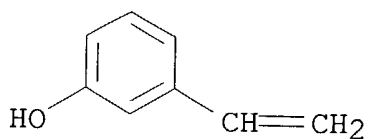
CMF C8 H8 O



CM 2

CRN 620-18-8

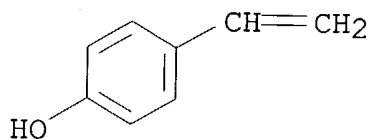
CMF C8 H8 O



RN 321164-59-4 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA
 INDEX NAME)

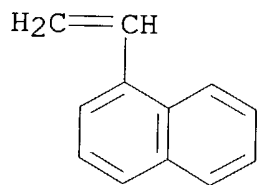
CM 1

CRN 2628-17-3
 CMF C8 H8 O



CM 2

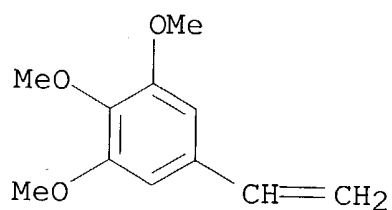
CRN 826-74-4
 CMF C12 H10



RN 345212-27-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 5-ethenyl-1,2,3-trimethoxybenzene
 (9CI) (CA INDEX NAME)

CM 1

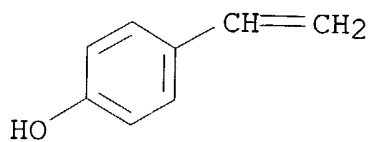
CRN 13400-02-7
 CMF C11 H14 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



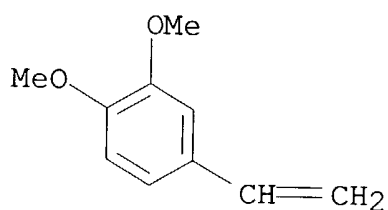
RN 345212-28-4 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenyl-1,2-dimethoxybenzene
(9CI) (CA INDEX NAME)

CM 1

CRN 6380-23-0

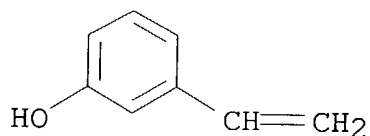
CMF C10 H12 O2



CM 2

CRN 620-18-8

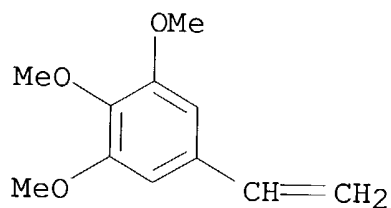
CMF C8 H8 O



RN 345212-30-8 HCA
CN Phenol, 3-ethenyl-, polymer with 5-ethenyl-1,2,3-trimethoxybenzene
(9CI) (CA INDEX NAME)

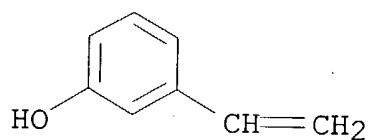
CM 1

CRN 13400-02-7
CMF C11 H14 O3



CM 2

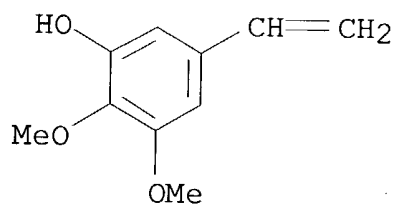
CRN 620-18-8
CMF C8 H8 O



RN 345212-36-4 HCA
CN Phenol, 5-ethenyl-2,3-dimethoxy-, polymer with 4-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

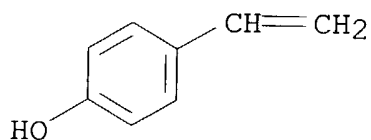
CRN 345212-35-3
CMF C10 H12 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



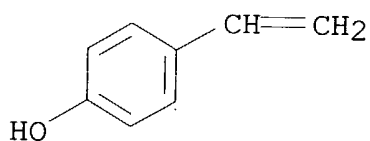
RN 345212-54-6 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenyl-1,1'-biphenyl (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

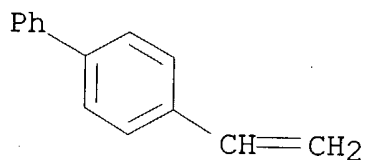
CMF C8 H8 O



CM 2

CRN 2350-89-2

CMF C14 H12

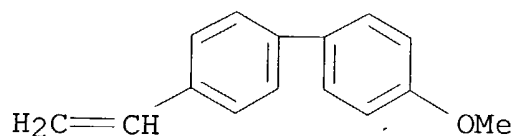


RN 345212-55-7 HCA
CN Phenol, 4-ethenyl-, polymer with 4-ethenyl-4'-methoxy-1,1'-biphenyl
(9CI) (CA INDEX NAME)

CM 1

CRN 2782-23-2

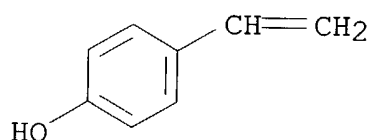
CMF C15 H14 O



CM 2

CRN 2628-17-3

CMF C8 H8 O

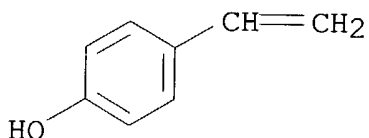


RN 345212-56-8 HCA
CN Phenol, 4-ethenyl-, polymer with 2-ethenylnaphthalene (9CI) (CA
INDEX NAME)

CM 1

CRN 2628-17-3

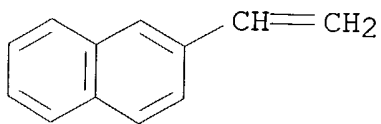
CMF C8 H8 O



CM 2

CRN 827-54-3

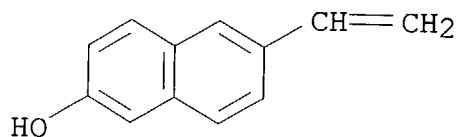
CMF C12 H10



RN 345212-60-4 HCA
CN 2-Naphthalenol, 6-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

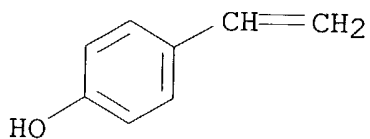
CM 1

CRN 136896-92-9
CMF C12 H10 O



CM 2

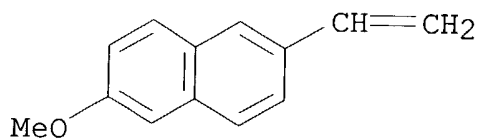
CRN 2628-17-3
CMF C8 H8 O



RN 345212-61-5 HCA
CN Phenol, 4-ethenyl-, polymer with 2-ethenyl-6-methoxynaphthalene (9CI) (CA INDEX NAME)

CM 1

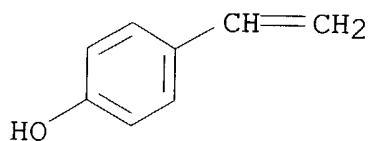
CRN 63444-51-9
CMF C13 H12 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



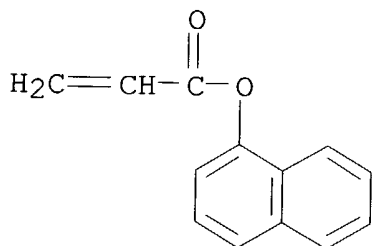
RN 345212-63-7 HCA

CN 2-Propenoic acid, 1-naphthalenyl ester, polymer with 4-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

CRN 20069-66-3

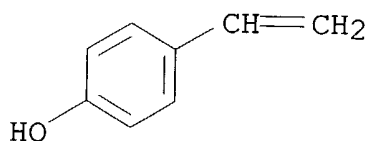
CMF C13 H10 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



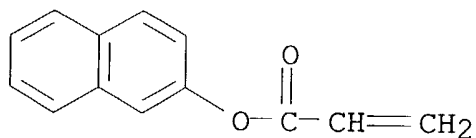
RN 345212-64-8 HCA

CN 2-Propenoic acid, 2-naphthalenyl ester, polymer with 4-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

CRN 52684-34-1

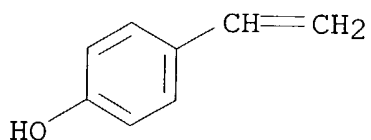
CMF C13 H10 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



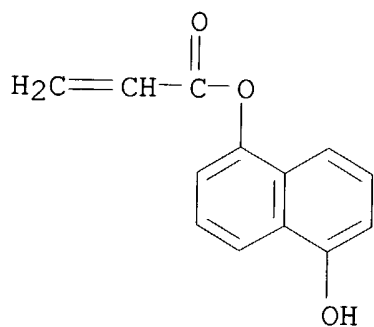
RN 345212-67-1 HCA

CN 2-Propenoic acid, 5-hydroxy-1-naphthalenyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-66-0

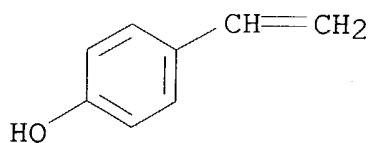
CMF C13 H10 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



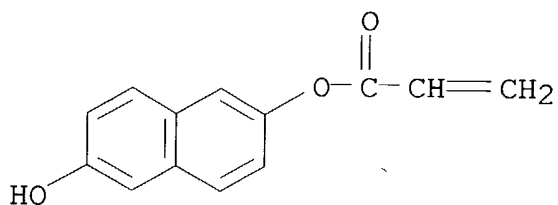
RN 345212-69-3 HCA

CN 2-Propenoic acid, 6-hydroxy-2-naphthalenyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-68-2

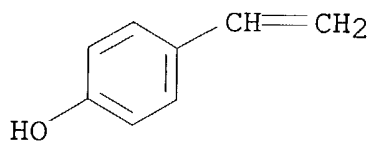
CMF C13 H10 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



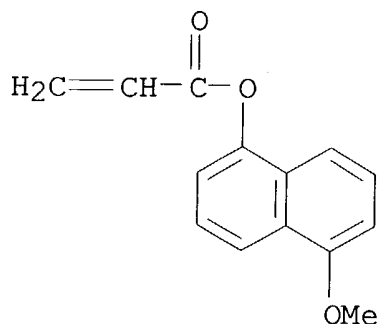
RN 345212-71-7 HCA

CN 2-Propenoic acid, 5-methoxy-1-naphthalenyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-70-6

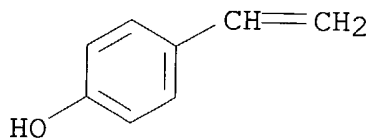
CMF C14 H12 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



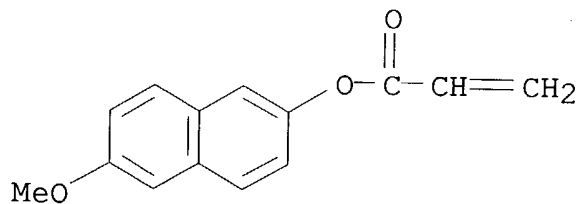
RN 345212-73-9 HCA

CN 2-Propenoic acid, 6-methoxy-2-naphthalenyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-72-8

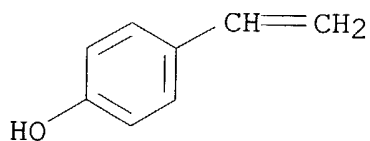
CMF C14 H12 O3



CM 2

CRN 2628-17-3

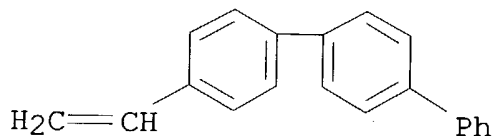
CMF C8 H8 O



RN 345212-74-0 HCA
 CN Phenol, 4-ethenyl-, polymer with 4-ethenyl-1,1':4',1''-terphenyl
 (9CI) (CA INDEX NAME)

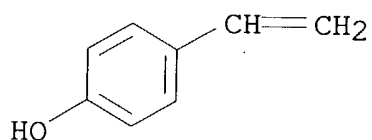
CM 1

CRN 4040-31-7
 CMF C20 H16



CM 2

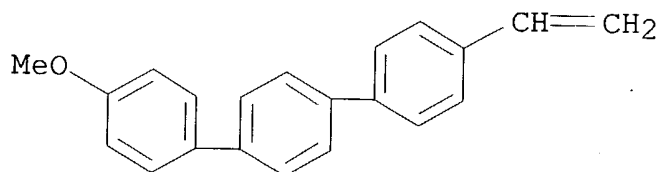
CRN 2628-17-3
 CMF C8 H8 O



RN 345212-77-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 4-ethenyl-4''-methoxy-1,1':4',1''-
 terphenyl (9CI) (CA INDEX NAME)

CM 1

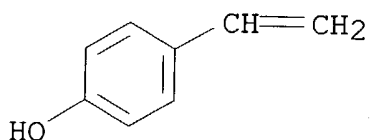
CRN 345212-76-2
 CMF C21 H18 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



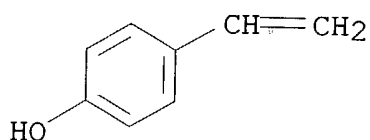
RN 345212-78-4 HCA

CN Phenol, 4-ethenyl-, polymer with 9-ethenylanthracene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

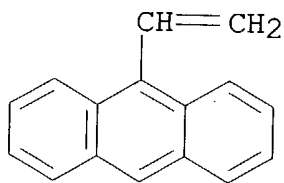
CMF C8 H8 O



CM 2

CRN 2444-68-0

CMF C16 H12

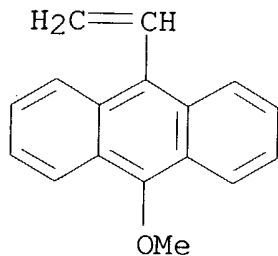


RN 345212-80-8 HCA

CN Phenol, 4-ethenyl-, polymer with 9-ethenyl-10-methoxyanthracene (9CI) (CA INDEX NAME)

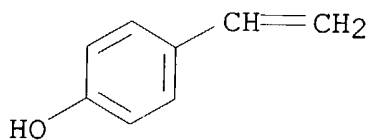
CM 1

CRN 345212-79-5
CMF C17 H14 O



CM 2

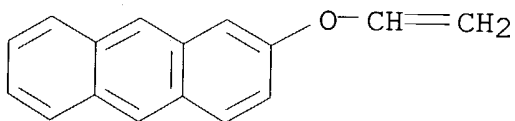
CRN 2628-17-3
CMF C8 H8 O



RN 345212-86-4 HCA
CN Phenol, 4-ethenyl-, polymer with 2-(ethenyloxy)anthracene (9CI) (CA INDEX NAME)

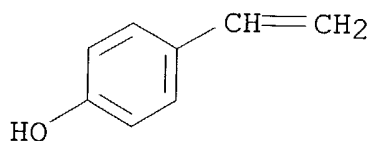
CM 1

CRN 7396-19-2
CMF C16 H12 O



CM 2

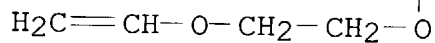
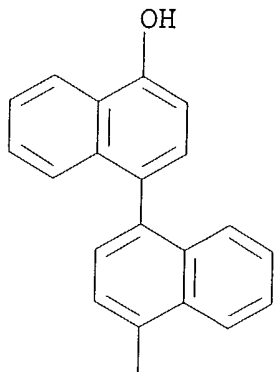
CRN 2628-17-3
CMF C8 H8 O



RN 345212-89-7 HCA
 CN [1,1'-Binaphthalen]-4-ol, 4'-[2-(ethenyloxy)ethoxy]-, polymer with
 4-ethenylphenol (9CI) (CA INDEX NAME)

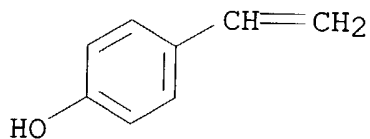
CM 1

CRN 345212-88-6
 CMF C24 H20 O3



CM 2

CRN 2628-17-3
 CMF C8 H8 O

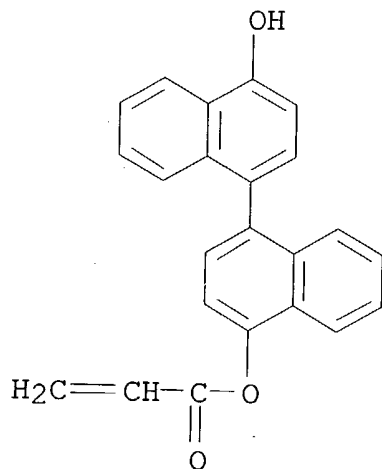


RN 345212-91-1 HCA
 CN 2-Propenoic acid, 4'-hydroxy[1,1'-binaphthalen]-4-yl ester, polymer
 with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 345212-90-0

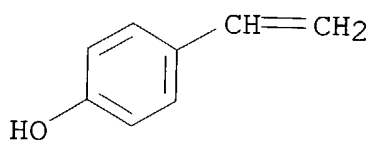
CMF C23 H16 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



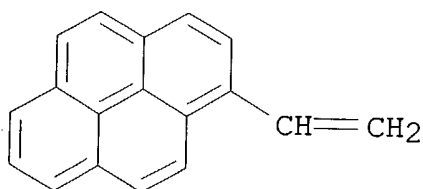
RN 345212-92-2 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenylpyrene (9CI) (CA INDEX NAME)

CM 1

CRN 17088-21-0

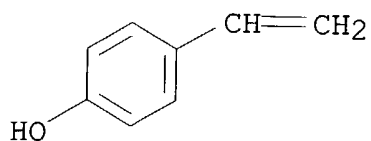
CMF C18 H12



CM 2

CRN 2628-17-3

CMF C8 H8 O



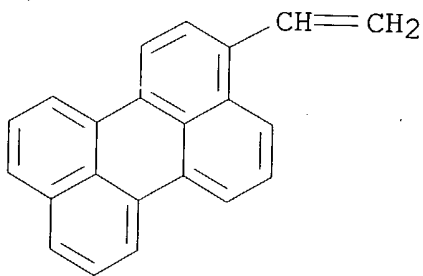
RN 345212-93-3 HCA

CN Phenol, 4-ethenyl-, polymer with 3-ethenylperylene (9CI) (CA INDEX NAME)

CM 1

CRN 77003-70-4

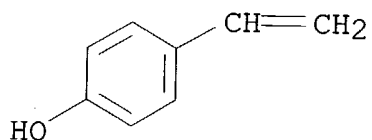
CMF C22 H14



CM 2

CRN 2628-17-3

CMF C8 H8 O

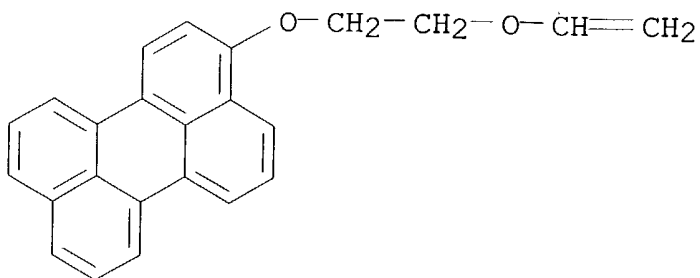


RN 345212-95-5 HCA

CN Phenol, 4-ethenyl-, polymer with 3-[2-(ethenyloxy)ethoxy]perylene (9CI) (CA INDEX NAME)

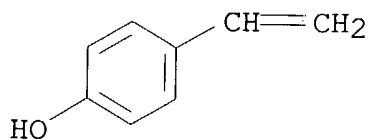
CM 1

CRN 345212-94-4
CMF C24 H18 O2



CM 2

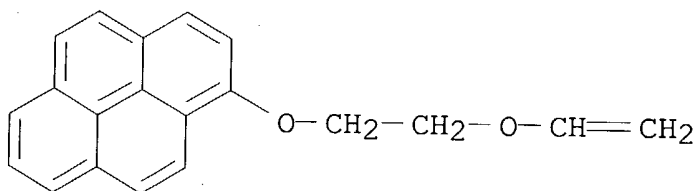
CRN 2628-17-3
CMF C8 H8 O



RN 345212-97-7 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[2-(ethenyloxy)ethoxy]pyrene
(9CI) (CA INDEX NAME)

CM 1

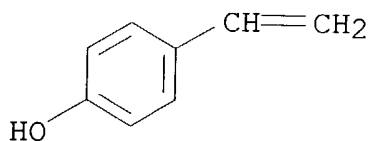
CRN 345212-96-6
CMF C20 H16 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



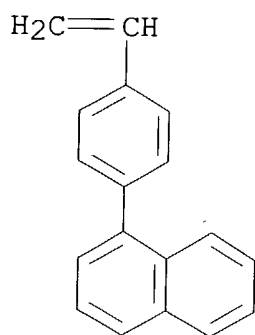
RN 345212-99-9 HCA

CN Phenol, 4-ethenyl-, polymer with 1-(4-ethenylphenyl)naphthalene
(9CI) (CA INDEX NAME)

CM 1

CRN 345212-98-8

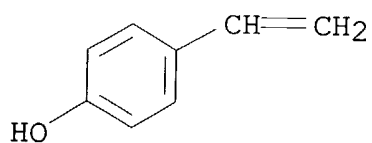
CMF C18 H14



CM 2

CRN 2628-17-3

CMF C8 H8 O



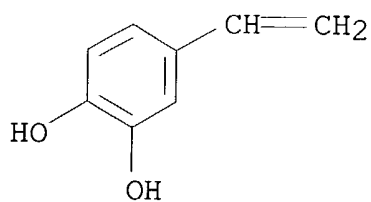
RN 349619-43-8 HCA

CN 1,2-Benzenediol, 4-ethenyl-, polymer with 3-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 6053-02-7

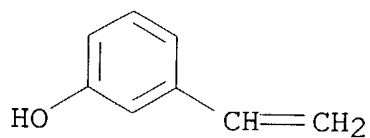
CMF C8 H8 O2



CM 2

CRN 620-18-8

CMF C8 H8 O



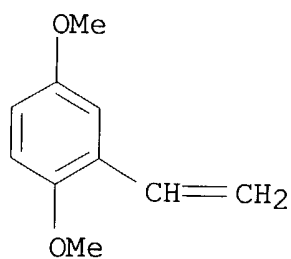
RN 425422-26-0 HCA

CN Phenol, 4-ethenyl-, polymer with 2-ethenyl-1,4-dimethoxybenzene
(9CI) (CA INDEX NAME)

CM 1

CRN 14568-68-4

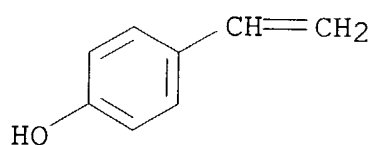
CMF C10 H12 O2



CM 2

CRN 2628-17-3

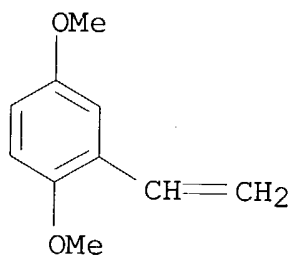
CMF C8 H8 O



RN 425422-30-6 HCA
CN Phenol, 3-ethenyl-, polymer with 2-ethenyl-1,4-dimethoxybenzene
(9CI) (CA INDEX NAME)

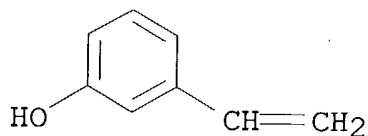
CM 1

CRN 14568-68-4
CMF C10 H12 O2



CM 2

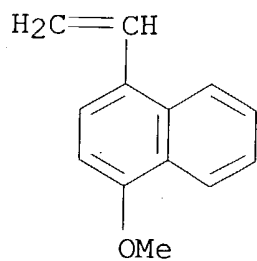
CRN 620-18-8
CMF C8 H8 O



RN 425422-38-4 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-methoxynaphthalene
(9CI) (CA INDEX NAME)

CM 1

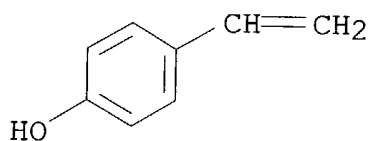
CRN 54447-91-5
CMF C13 H12 O



CM 2

CRN 2628-17-3

CMF C8 H8 O



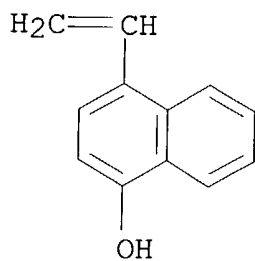
RN 425422-40-8 HCA

CN 1-Naphthalenol, 4-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 153233-63-7

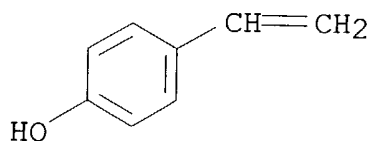
CMF C12 H10 O



CM 2

CRN 2628-17-3

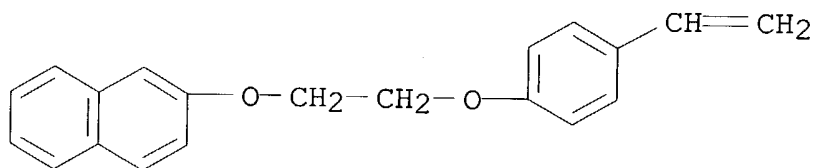
CMF C8 H8 O



RN 425422-53-3 HCA
 CN Phenol, 4-ethenyl-, polymer with 2-[2-(4-ethenylphenoxy)ethoxy]naphthalene (9CI) (CA INDEX NAME)

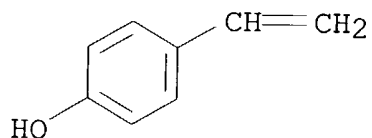
CM 1

CRN 425422-52-2
 CMF C20 H18 O2



CM 2

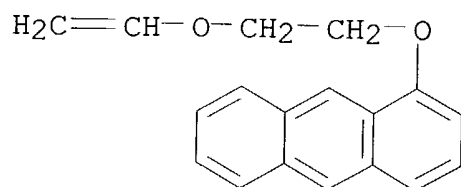
CRN 2628-17-3
 CMF C8 H8 O



RN 425422-59-9 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-[2-(ethenyloxy)ethoxy]anthracene (9CI) (CA INDEX NAME)

CM 1

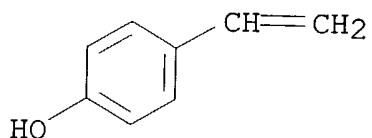
CRN 425422-58-8
 CMF C18 H16 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



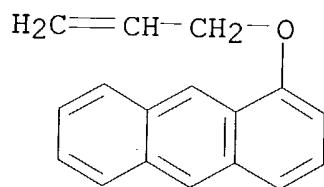
RN 425422-62-4 HCA

CN Phenol, 4-ethenyl-, polymer with 1-(2-propenyloxy)anthracene (9CI)
(CA INDEX NAME)

CM 1

CRN 425422-61-3

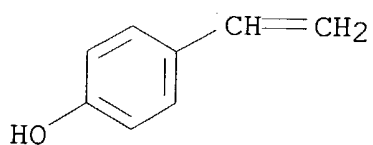
CMF C17 H14 O



CM 2

CRN 2628-17-3

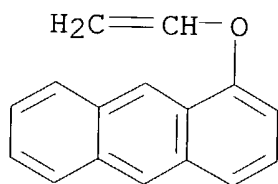
CMF C8 H8 O



RN 425422-65-7 HCA
 CN Phenol, 4-ethenyl-, polymer with 1-(ethenyloxy)anthracene (9CI) (CA
 INDEX NAME)

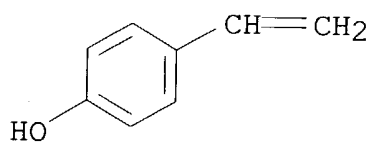
CM 1

CRN 425422-64-6
 CMF C16 H12 O



CM 2

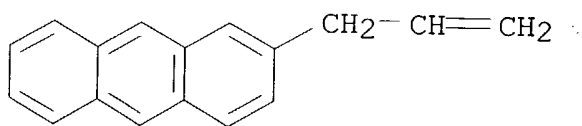
CRN 2628-17-3
 CMF C8 H8 O



RN 425422-68-0 HCA
 CN Phenol, 4-ethenyl-, polymer with 2-(2-propenyl)anthracene (9CI) (CA
 INDEX NAME)

CM 1

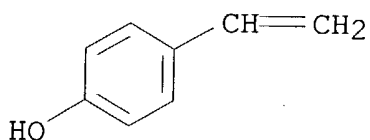
CRN 60900-44-9
 CMF C17 H14



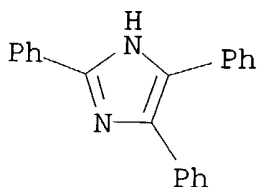
CM 2

CRN 2628-17-3

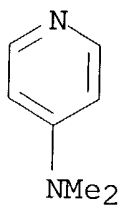
CMF C8 H8 O



IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3,
 4-Dimethylaminopyridine 3001-72-7, 1,5-
 Diazabicyclo[4.3.0]non-5-ene
 (chem.-amplified neg.-working **resist** compns. contg.
 compds. which generate radicals upon irradiation.)
 RN 484-47-9 HCA
 CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

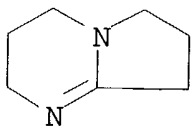


RN 1122-58-3 HCA
 CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
 CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)

(CA INDEX NAME)



IT 270563-96-7P

(photoacid generator; chem.-amplified neg.-working **resist** compns. contg. compds. which generate radicals upon irradiation.)

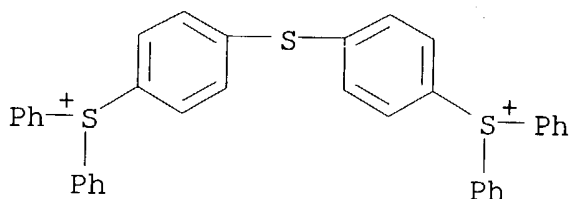
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

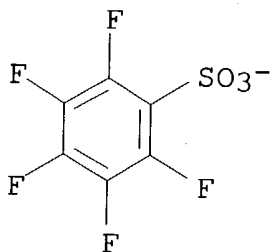
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



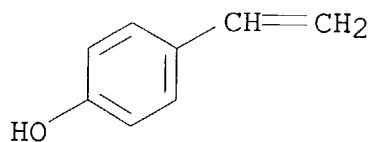
IC ICM G03F007-038

ICS C08K005-00; C08L101-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

- ST chem amplified neg **resist** radical generator;
tetrahydrofurfuryl benzenetricarboxylate radical generator neg
resist
- IT Electron beam **resists**
Resists
(neg.-working; chem.-amplified neg.-working **resist**
compns. contg. compds. which generate radicals upon irradiation.)
- IT 105649-65-8DP, 3-t-Butoxystyrene homopolymer, hydrolyzed
149614-53-9P 169549-85-3DP, hydrolyzed
321164-59-4P 345212-27-3P 345212-28-4P
345212-30-8P 345212-36-4P 345212-54-6P
345212-55-7P 345212-56-8P 345212-60-4P
345212-61-5P 345212-63-7P 345212-64-8P
345212-67-1P 345212-69-3P 345212-71-7P
345212-73-9P 345212-74-0P 345212-77-3P
345212-78-4P 345212-80-8P 345212-86-4P
345212-89-7P 345212-91-1P 345212-92-2P
345212-93-3P 345212-95-5P 345212-97-7P
345212-99-9P 349619-43-8P 425422-24-8DP,
4-t-Butoxystyrene-3,4-dimethoxystyrene copolymer, hydrolyzed
425422-26-0P 425422-30-6P 425422-38-4P
425422-40-8P 425422-53-3P 425422-59-9P
425422-62-4P 425422-65-7P 425422-68-0P
425615-29-8DP, hydrolyzed
(alkali-sol. resin; chem.-amplified neg.-working **resist**
compns. contg. compds. which generate radicals upon irradiation.)
- IT 60-24-2 64-69-7 75-62-7 75-66-1 98-13-5 98-85-1
100-51-6, Benzenemethanol, uses 107-96-0 118-75-2, uses
140-11-4 304-88-1 484-47-9, 2,4,5-Triphenylimidazole
507-63-1 524-38-9 530-48-3 539-74-2 556-56-9 558-13-4,
Carbon tetrabromide 586-61-8 599-99-5 629-27-6
1122-58-3, 4-Dimethylaminopyridine 1155-51-7 1212-08-4
1746-13-0 2043-57-4 2444-68-0 2885-00-9, 1-Octadecanethiol
3001-72-7, 1,5-Diazabicyclo[4.3.0]non-5-ene 3698-94-0
4623-50-1 5586-15-2 6674-22-2, 1,8-Diazabicyclo[5.4.0]undec-7-
ene 7031-93-8 10193-99-4 10478-23-6 10568-85-1 21545-54-0
45708-67-6 60012-29-5 61758-07-4, 2-Octene-1-thiol 62753-17-7
425421-73-4 425421-79-0 425421-81-4 425421-83-6
(chem.-amplified neg.-working **resist** compns. contg.
compds. which generate radicals upon irradiation.)
- IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P
185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P
197087-74-4P
(crosslinking agent; chem.-amplified neg.-working **resist**
compns. contg. compds. which generate radicals upon irradiation.)
- IT 110726-28-8P, Trisp-PA
(in prepn. of crosslinking agent; chem.-amplified neg.-working
resist compns. contg. compds. which generate radicals

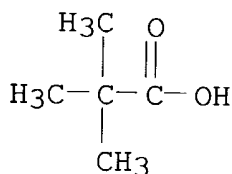
- upon irradiation.)
- IT 832-53-1, Pentafluorobenzenesulfonyl chloride 2049-95-8, tert-Amylbenzene 4270-70-6, Triphenylsulfonium chloride (in prepn. of photoacid generator; chem.-amplified neg.-working **resist** compns. contg. compds. which generate radicals upon irradiation.)
- IT 258341-98-9P 270563-93-4P **270563-96-7P** (photoacid generator; chem.-amplified neg.-working **resist** compns. contg. compds. which generate radicals upon irradiation.)
- IT 194999-82-1 279244-45-0 (photoacid generator; chem.-amplified neg.-working **resist** compns. contg. compds. which generate radicals upon irradiation.)
- L46 ANSWER 16 OF 23 HCA COPYRIGHT 2004 ACS on STN
- 136:377471 Positively working radiation-sensitive **resist** composition with improved coatability. Kanna, Shinichi; Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002131898 A2 20020509, 63 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-327424 20001026.
- AB The compn. contains (A) polymers increasing soly. in alkali developers by decompn. with acids, (B) acid generator by irradiation of actinic ray, (C) org. basic compds., (D) solvents, and (E) 50-5000 ppm surfactants, preferably having fluoroalkyl group in the mol., to get discolored by irradiation of actinic ray. The compn. prevents generation of standing wave.
- IT **24979-70-2DP**, VP 8000, reaction products with Bu vinyl ether and cyclohexaneethanol **121273-79-8P 129674-22-2P**, p-(tert-Butoxycarbonyloxy)styrene-p-hydroxystyrene copolymer **158593-28-3P**, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer **159296-87-4P**, tert-Butyl acrylate-p-vinylphenol copolymer **199432-82-1P**, p-Hydroxystyrene-p-(1-isobutoxyethoxy)styrene copolymer **200808-68-0P**, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer **288620-15-5P**, p-(1-Benzoyloxyethoxy)styrene-p-hydroxystyrene copolymer **325143-38-2P 387382-49-2P 422508-71-2P 422508-72-3P 422508-74-5P 422508-76-7P 422508-77-8P 422508-78-9P** (pos.-working radiation-sensitive **resist** compn. contg. fluoroalkyl-substituted discolorable surfactant with improved coatability)
- RN 24979-70-2 HCA
- CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)
- CM 1
- CRN 2628-17-3
- CMF C8 H8 O



RN 121273-79-8 HCA
 CN Phenol, 4-ethenyl-, homopolymer, 2,2-dimethylpropanoate (9CI) (CA INDEX NAME)

CM 1

CRN 75-98-9
 CMF C5 H10 O2

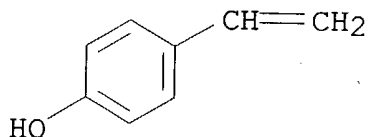


CM 2

CRN 24979-70-2
 CMF (C8 H8 O)x
 CCI PMS

CM 3

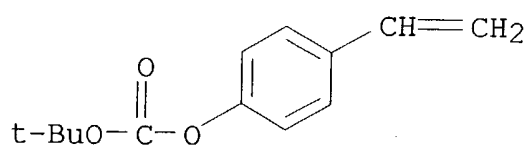
CRN 2628-17-3
 CMF C8 H8 O



RN 129674-22-2 HCA
 CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

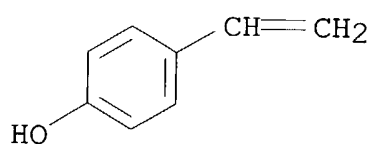
CRN 87188-51-0
 CMF C13 H16 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



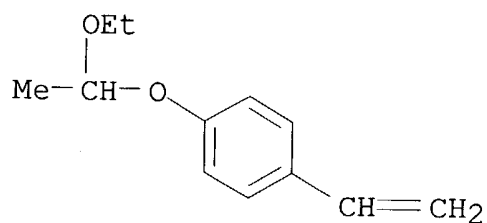
RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0

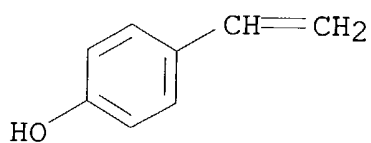
CMF C12 H16 O2



CM 2

CRN 2628-17-3

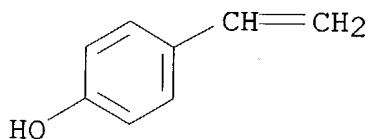
CMF C8 H8 O



RN 159296-87-4 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
4-ethenylphenol (9CI) (CA INDEX NAME)

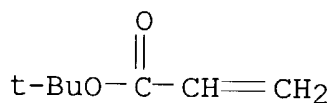
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

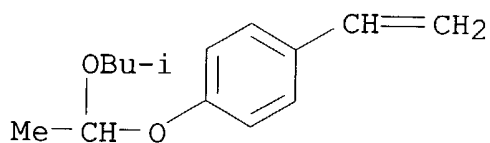
CRN 1663-39-4
CMF C7 H12 O2



RN 199432-82-1 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

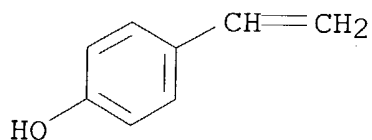
CM 1

CRN 192314-53-7
CMF C14 H20 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



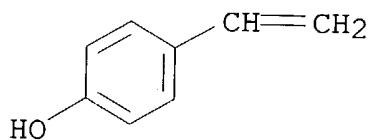
RN 200808-68-0 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

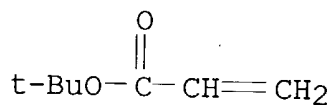
CMF C8 H8 O



CM 2

CRN 1663-39-4

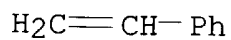
CMF C7 H12 O2



CM 3

CRN 100-42-5

CMF C8 H8



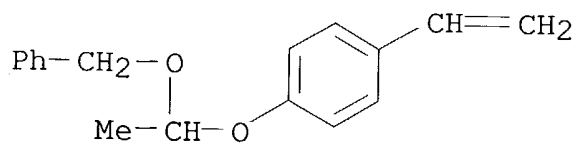
RN 288620-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-14-4

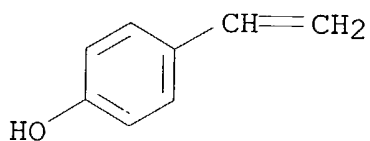
CMF C17 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



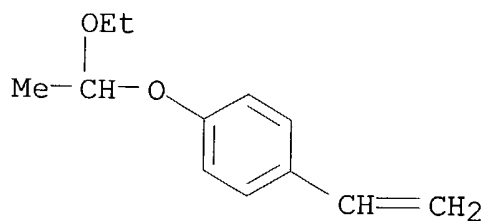
RN 325143-38-2 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 157057-20-0

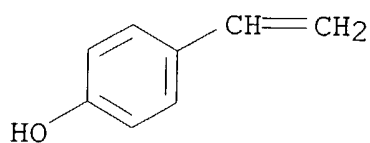
CMF C12 H16 O2



CM 2

CRN 2628-17-3

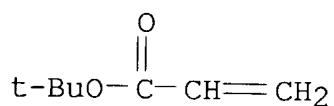
CMF C8 H8 O



CM 3

CRN 1663-39-4

CMF C7 H12 O2



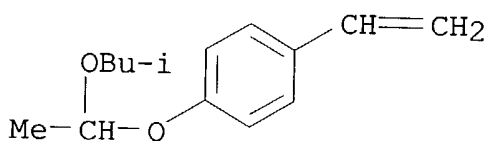
RN 387382-49-2 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
 1-ethenyl-4-[1-(2-methylpropoxy)ethoxy]benzene and 4-ethenylphenol
 (9CI) (CA INDEX NAME)

CM 1

CRN 192314-53-7

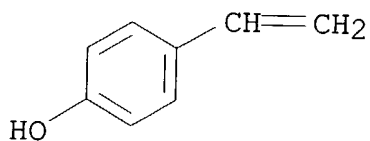
CMF C14 H20 O2



CM 2

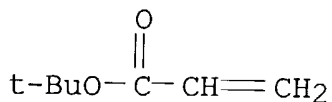
CRN 2628-17-3

CMF C8 H8 O



CM 3

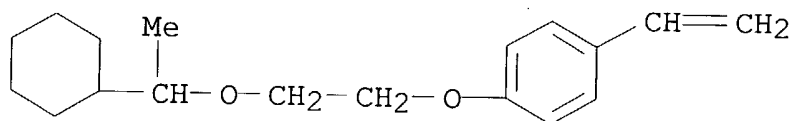
CRN 1663-39-4
CMF C7 H12 O2



RN 422508-71-2 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[2-(1-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

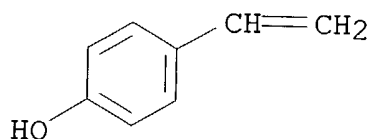
CM 1

CRN 422508-70-1
CMF C18 H26 O2



CM 2

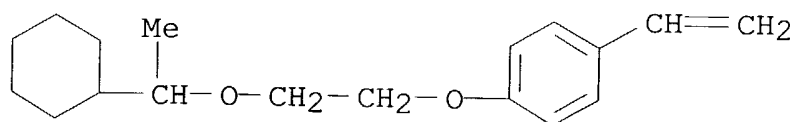
CRN 2628-17-3
CMF C8 H8 O



RN 422508-72-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-[2-(1-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

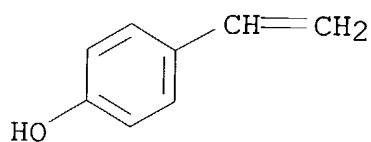
CRN 422508-70-1
CMF C18 H26 O2



CM 2

CRN 2628-17-3

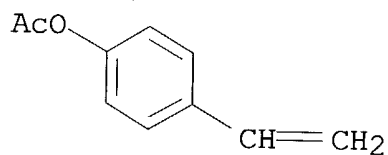
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



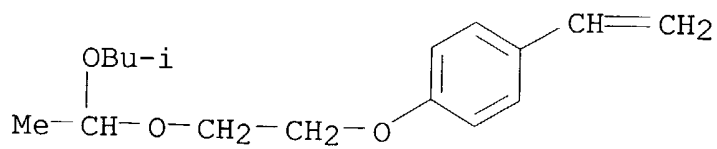
RN 422508-74-5 HCA

CN Carbonic acid, butyl 4-ethenylphenyl ester, polymer with
1-ethenyl-4-[2-[1-(2-methylpropoxy)ethoxy]ethoxy]benzene and
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 422508-73-4

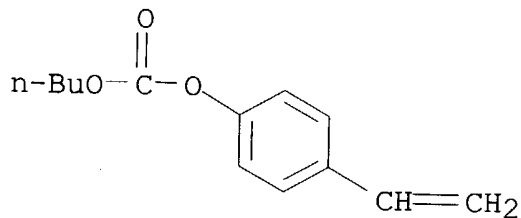
CMF C16 H24 O3



CM 2

CRN 100920-85-2

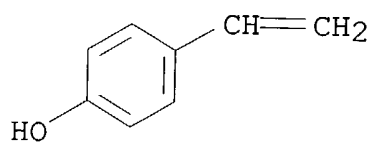
CMF C13 H16 O3



CM 3

CRN 2628-17-3

CMF C8 H8 O



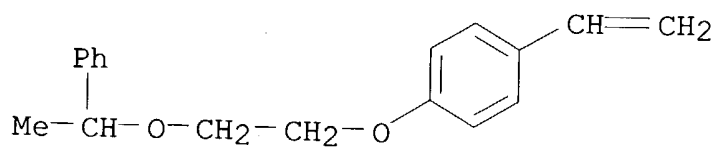
RN 422508-76-7 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and 1-ethenyl-4-[2-(1-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 422508-75-6

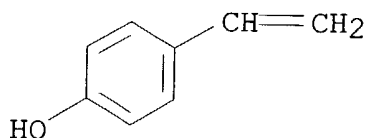
CMF C18 H20 O2



CM 2

CRN 2628-17-3

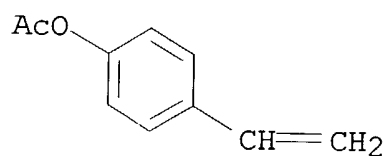
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



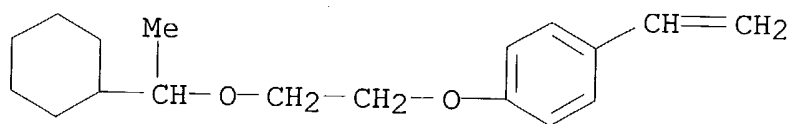
RN 422508-77-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[2-(1-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 422508-70-1

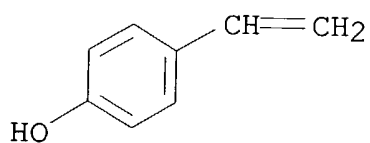
CMF C18 H26 O2



CM 2

CRN 2628-17-3

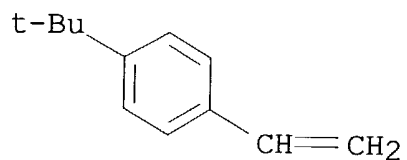
CMF C8 H8 O



CM 3

CRN 1746-23-2

CMF C12 H16



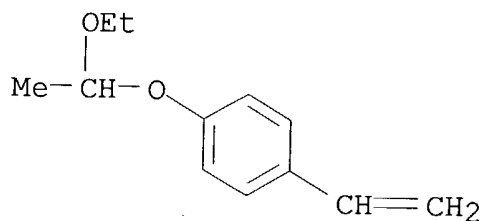
RN 422508-78-9 HCA

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
1,1-dimethylethyl 4-ethenylphenyl carbonate, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0

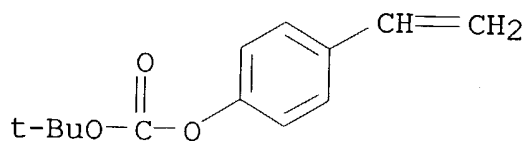
CMF C12 H16 O2



CM 2

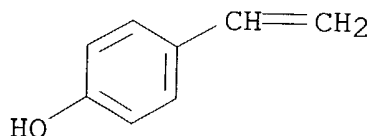
CRN 87188-51-0

CMF C13 H16 O3



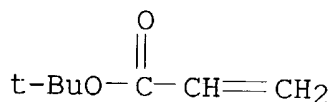
CM 3

CRN 2628-17-3
CMF C8 H8 O

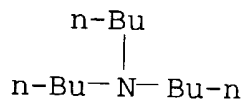


CM 4

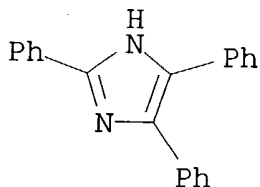
CRN 1663-39-4
CMF C7 H12 O2



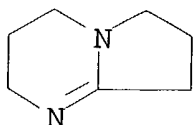
IT 102-82-9, Tributylamine 484-47-9,
2,4,5-Triphenylimidazole 3001-72-7, 1,5-
Diazabicyclo[4.3.0]-5-nonene 422508-63-2
(pos.-working radiation-sensitive **resist** compn. contg.
fluoroalkyl-substituted discolorable surfactant with improved
coatability)
RN 102-82-9 HCA
CN 1-Butanamine, N,N-dibutyl- (9CI) (CA INDEX NAME)



RN 484-47-9 HCA
CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA
CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)



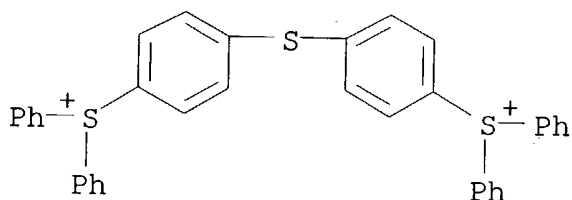
RN 422508-63-2 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzoic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

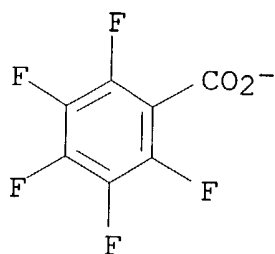
CMF C36 H28 S3



CM 2

CRN 59561-61-4

CMF C7 F5 O2



IC ICM G03F007-004

ICS G03F007-004; C08K005-00; C08L101-12; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST pos radiation sensitive resit coatability standing wave prevention;
fluoroalkyl discolorable surfactant radiation sensitive
resist

IT Positive photoresists

Surfactants

(pos.-working radiation-sensitive **resist** compn. contg. fluoroalkyl-substituted discolorable surfactant with improved coatability)

IT 13891-29-7, Triphenylsulfonium p-toluenesulfonate 138529-81-4,
Bis(cyclohexylsulfonyl)diazomethane 197447-16-8 422508-79-0
(photoacid generator; pos.-working radiation-sensitive **resist** compn. contg. fluoroalkyl-substituted discolorable surfactant with improved coatability)

IT 109-53-5DP, Isobutyl vinyl ether, reaction products with Bu acrylate-hydroxystyrene copolymer 926-02-3DP, tert-Butyl vinyl ether, reaction products with hydroxystyrene polymer and cyclohexaneethanol 4442-79-9DP, Cyclohexaneethanol, reaction products with hydroxystyrene polymer and Bu vinyl ether 24979-70-2DP, VP 8000, reaction products with Bu vinyl ether and cyclohexaneethanol 121273-79-8P 129674-22-2P
, p-(tert-Butoxycarbonyloxy)styrene-p-hydroxystyrene copolymer 158593-28-3P, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer 159296-87-4P, tert-Butyl acrylate-p-vinylphenol copolymer 199432-82-1P, p-Hydroxystyrene-p-(1-isobutoxyethoxy)styrene copolymer 200808-68-0P, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer 288620-15-5P, p-(1-Benzoyloxyethoxy)styrene-p-hydroxystyrene copolymer 325143-38-2P 365971-61-5P 365971-64-8P 365971-70-6P
365971-71-7P 365971-72-8P 376600-58-7P 387382-49-2P
422508-57-4P 422508-61-0P 422508-62-1P 422508-64-3P
422508-65-4P 422508-66-5P 422508-67-6P 422508-71-2P
422508-72-3P 422508-74-5P 422508-76-7P
422508-77-8P 422508-78-9P

(pos.-working radiation-sensitive **resist** compn. contg. fluoroalkyl-substituted discolorable surfactant with improved coatability)

IT 524-38-9, N-Hydroxyphthalimide 3744-08-9, Triphenylsulfonium iodide 141784-10-3, 2-Nitro-6-trifluoromethylbenzyl alcohol 365971-60-4

(pos.-working radiation-sensitive **resist** compn. contg. fluoroalkyl-substituted discolorable surfactant with improved coatability)

IT 102-82-9, Tributylamine 484-47-9,
2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 312386-77-9 422508-59-6
422508-63-2 422508-69-8

(pos.-working radiation-sensitive **resist** compn. contg. fluoroalkyl-substituted discolorable surfactant with improved coatability)

ultra-microlithography. Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1193555 A1 20020403, 50 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-120664 20010831. PRIORITY: JP 2000-263815 20000831.

AB The invention relates to a neg. **resist** compn. suitable for use in ultra-microlithog. for producing VLSI and microchips and other photofabrication processes and in processing semiconductor devices using high-energy beams such as an electron beam. Fine patterns can be formed using the **resist** compn. in x-ray lithog. The compn. comprises: an alkali-sol. resin; a compd. capable of generating an acid upon irradiation; a crosslinking agent capable of crosslinking by the action of an acid; and a solvent mixt. contg.: .gtoreq.1 solvent selected from the group (a) ; and .gtoreq.1 selected from the group consisting of groups (b) and (c): (a) a propylene glycol monoalkyl ether carboxylate; (b) a propylene glycol monoalkyl ether, an alkyl lactate, an acetic ester, a chain ketone and an alkyl alkoxypropionate; and (c) a .gamma.-butyrolactone, an ethylene carbonate and a propylene carbonate.

IT 270563-96-7 389859-77-2 406914-01-0
(acid-generating agent; alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)

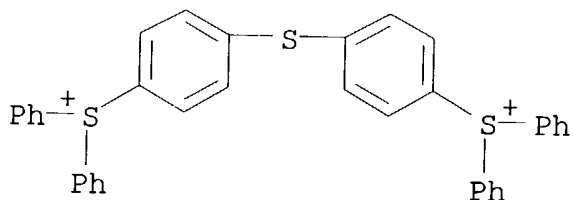
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

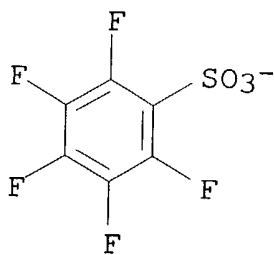
CMF C36 H28 S3



CM 2

CRN 46377-88-2

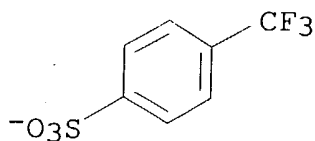
CMF C6 F5 O3 S



RN 389859-77-2 HCA
 CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
 4-(trifluoromethyl)benzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

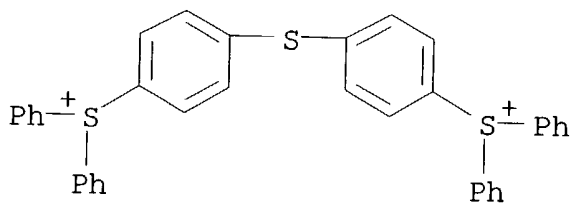
CM 1

CRN 120998-63-2
 CMF C7 H4 F3 O3 S



CM 2

CRN 74227-34-2
 CMF C36 H28 S3

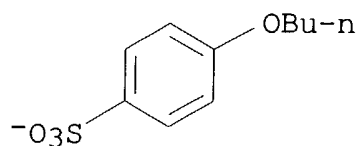


RN 406914-01-0 HCA
 CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
 4-butoxybenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 406914-00-9

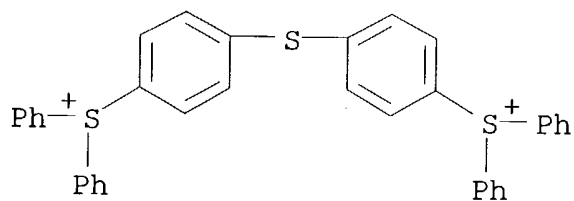
CMF C10 H13 O4 S



CM 2

CRN 74227-34-2

CMF C36 H28 S3



IT 24979-69-9P 24979-70-2P 24979-73-5P

149614-53-9P 349619-43-8P 349619-47-2P

349619-51-8P 349619-56-3P 349619-61-0P

349619-65-4P 349619-68-7P 349619-72-3P

349619-76-7P 349619-80-3P

(alkali-sol. resin contg. styrene polymer for neg. resist
compn. for x-ray/electron-beam lithog.)

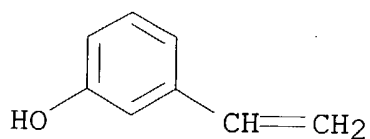
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O

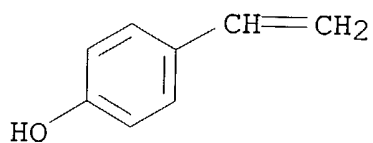


RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

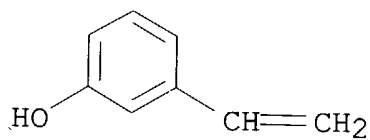
CRN 2628-17-3
CMF C8 H8 O



RN 24979-73-5 HCA
CN Phenol, 3-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

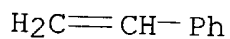
CM 1

CRN 620-18-8
CMF C8 H8 O



CM 2

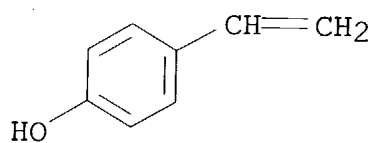
CRN 100-42-5
CMF C8 H8



RN 149614-53-9 HCA
CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

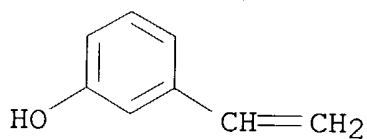
CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 620-18-8

CMF C8 H8 O



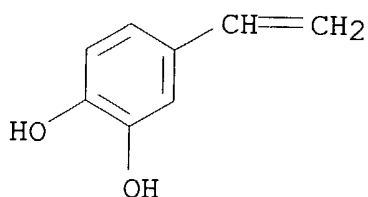
RN 349619-43-8 HCA

CN 1,2-Benzenediol, 4-ethenyl-, polymer with 3-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 6053-02-7

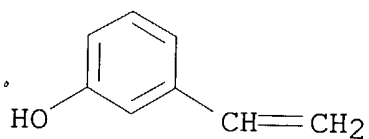
CMF C8 H8 O2



CM 2

CRN 620-18-8

CMF C8 H8 O

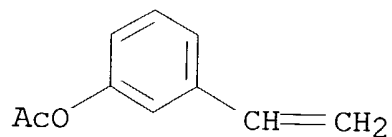


RN 349619-47-2 HCA

CN Phenol, 3-ethenyl-, polymer with 3-ethenylphenyl acetate (9CI) (CA INDEX NAME)

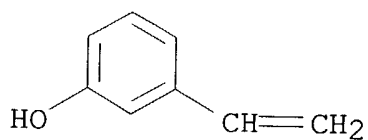
CM 1

CRN 2454-30-0
CMF C10 H10 O2



CM 2

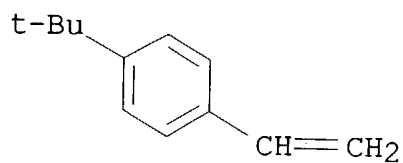
CRN 620-18-8
CMF C8 H8 O



RN 349619-51-8 HCA
CN Phenol, 3-ethenyl-, polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

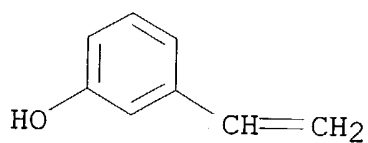
CM 1

CRN 1746-23-2
CMF C12 H16



CM 2

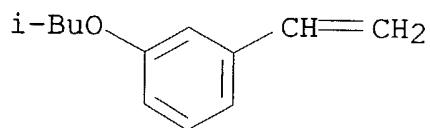
CRN 620-18-8
CMF C8 H8 O



RN 349619-56-3 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-3-(2-methylpropoxy)benzene (9CI) (CA INDEX NAME)

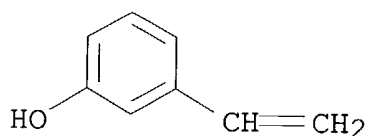
CM 1

CRN 349619-55-2
CMF C12 H16 O



CM 2

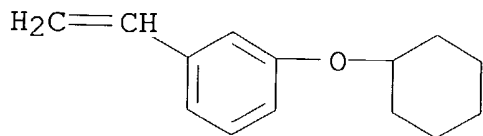
CRN 620-18-8
CMF C8 H8 O



RN 349619-61-0 HCA
CN Phenol, 3-ethenyl-, polymer with 1-(cyclohexyloxy)-3-ethenylbenzene (9CI) (CA INDEX NAME)

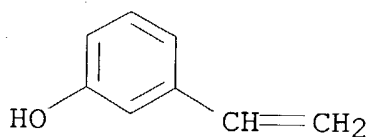
CM 1

CRN 349619-60-9
CMF C14 H18 O



CM 2

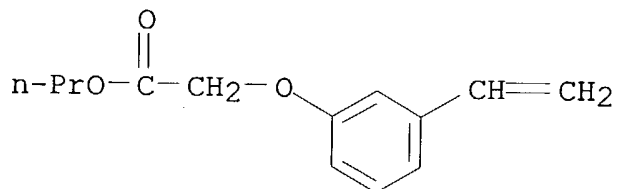
CRN 620-18-8
CMF C8 H8 O



RN 349619-65-4 HCA
CN Acetic acid, (3-ethenylphenoxy)-, propyl ester, polymer with
3-ethenylphenol (9CI) (CA INDEX NAME)

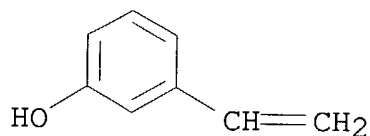
CM 1

CRN 349619-64-3
CMF C13 H16 O3



CM 2

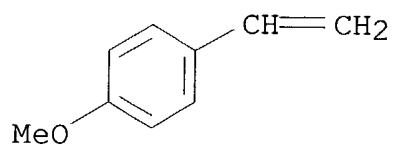
CRN 620-18-8
CMF C8 H8 O



RN 349619-68-7 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI)
(CA INDEX NAME)

CM 1

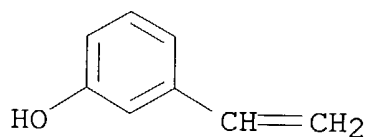
CRN 637-69-4
CMF C9 H10 O



CM 2

CRN 620-18-8

CMF C8 H8 O



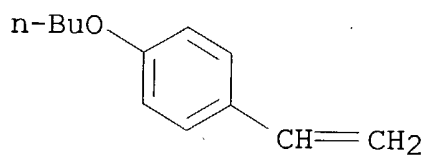
RN 349619-72-3 HCA

CN Phenol, 3-ethenyl-, polymer with 1-butoxy-4-ethenylbenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 105337-03-9

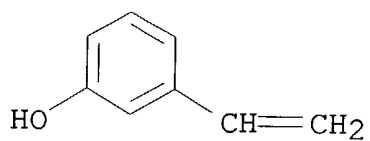
CMF C12 H16 O



CM 2

CRN 620-18-8

CMF C8 H8 O



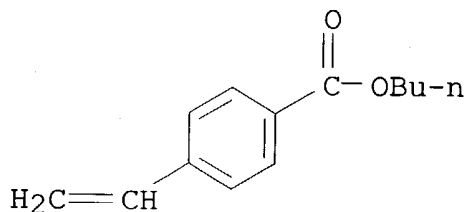
RN 349619-76-7 HCA

CN Benzoic acid, 4-ethenyl-, butyl ester, polymer with 3-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

CRN 2715-41-5

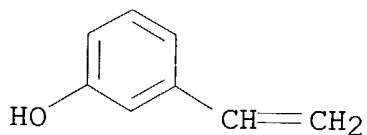
CMF C13 H16 O2



CM 2

CRN 620-18-8

CMF C8 H8 O



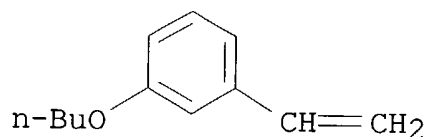
RN 349619-80-3 HCA

CN Phenol, 3-ethenyl-, polymer with 1-butoxy-3-ethenylbenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 156660-60-5

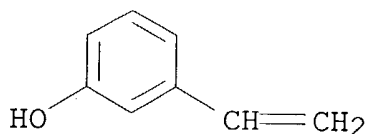
CMF C12 H16 O



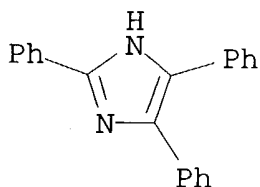
CM 2

CRN 620-18-8

CMF C8 H8 O



IT 484-47-9
 (neg. **photoresist** compn. for x-ray/electron-beam
 lithog. contg. alkali-sol. resin and crosslinking agent and
 surfactant)
 RN 484-47-9 HCA
 CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-004
 ICS G03F007-038
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 76
 ST neg **photoresist** alkali soluble resin crosslinking agent
 semiconductor device; electron beam lithog microchip
photoresist polystyrene glycol ether surfactant
 IT Electron beam lithography
 Negative **photoresists**
 X-ray lithography
 (neg. **photoresist** compn. for x-ray/electron-beam
 lithog. contg. alkali-sol. resin and crosslinking agent and
 surfactant)
 IT Polysiloxanes, uses
 (neg. **photoresist** compn. for x-ray/electron-beam
 lithog. contg. alkali-sol. resin and crosslinking agent and
 surfactant)
 IT Phenolic resins, uses
 (novolak; neg. **photoresist** compn. for
 x-ray/electron-beam lithog. contg. alkali-sol. resin and
 crosslinking agent and surfactant)
 IT Fluoropolymers, uses
 (surfactants; neg. **photoresist** compn. for
 x-ray/electron-beam lithog. contg. alkali-sol. resin and

- crosslinking agent and surfactant)
- IT 66003-78-9P 406913-96-0P
(acid-generating agent; alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)
- IT 270563-92-3 270563-93-4 **270563-96-7** 279244-39-2
349619-92-7 349647-26-3 **389859-77-2** 398457-16-4
406914-01-0
(acid-generating agent; alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)
- IT 153698-46-5P 258341-98-9P 270564-02-8P
(acid-generating agent; alkali-sol. resin contg. styrene polymer for neg. **resist** compn. for x-ray/electron-beam lithog.)
- IT 3744-08-9P, Triphenylsulfonium iodide 258342-09-5P
(alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)
- IT 75-59-2, Tetramethylammonium hydroxide 832-53-1,
Pentafluorobenzenesulfonyl chloride 945-51-7, Diphenyl sulfoxide
2049-95-8, tert-Amylbenzene
(alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)
- IT **24979-69-9P 24979-70-2P 24979-73-5P**
27029-76-1P **149614-53-9P 349619-43-8P**
349619-47-2P 349619-51-8P 349619-56-3P
349619-61-0P 349619-65-4P 349619-68-7P
349619-72-3P 349619-76-7P 349619-80-3P
(alkali-sol. resin contg. styrene polymer for neg. **resist** compn. for x-ray/electron-beam lithog.)
- IT 3089-11-0P 109185-69-5P 185502-11-8P 185502-14-1P
185502-15-2P 197087-74-4P
(crosslinking agent; alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)
- IT 161679-94-3P 162846-57-3P
(crosslinking agent; alkali-sol. resin contg. styrene polymer for neg. **resist** compn. for x-ray/electron-beam lithog.)
- IT 110726-28-8, Trisp-Pa
(formylation; alkali-sol. resin contg. styrene polymer for neg. **photoresist** compn. for x-ray/electron-beam lithog.)
- IT 96-48-0 96-49-1, 1,3-Dioxolan-2-one 97-64-3 108-32-7
763-69-9 1320-67-8 84540-57-8 98516-33-7
(neg. **photoresist** compn. for x-ray/electron-beam lithog. contg. alkali-sol. resin and crosslinking agent and solvent mixt. contg.)
- IT **484-47-9**
(neg. **photoresist** compn. for x-ray/electron-beam lithog. contg. alkali-sol. resin and crosslinking agent and

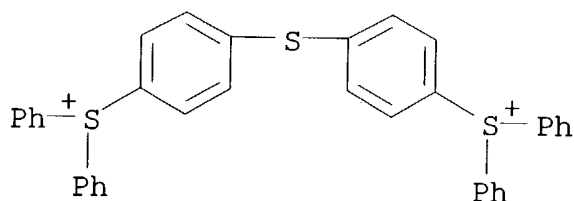
surfactant)

- L46 ANSWER 18 OF 23 HCA COPYRIGHT 2004 ACS on STN
 136:286595 Positive **resist** composition. Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1193556 A1 20020403, 91 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-120747 20010906. PRIORITY: JP 2000-270158 20000906; JP 2000-290563 20000925.
- AB A pos. electron compn. comprises: (a) a compd. capable of generating an acid upon irradiation with a radiation; (b) a compd. having a cationically polymerizable function; and (c) a solvent mixt. contg. at least one solvent selected from Group (A): propylene glycol monoalkyl ether carboxylate; and at least one solvent selected from Group (B): propylene glycol monoalkyl ether, alkyl lactate, an acetic ester, a chain ketone and an alkyl alkoxypropionate; and Group (C): γ -butyrolactone, an ethylene carbonate and a propylene carbonate. The object of the present invention is to provide a pos. chem. amplification type **resist** compn. for electron beam or x-ray, which is satisfied in the properties regarding sensitivity and resolu. for electron beam or x-ray used, rectangular **resist** profile, PCD stability, PED stability, development defect, coatibility and solvent soly.
- IT 270563-96-7 279244-43-8 405893-15-4
 (acid generator; electron beam and x-ray pos. **resist** compn. contg.)
- RN 270563-96-7 HCA
- CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

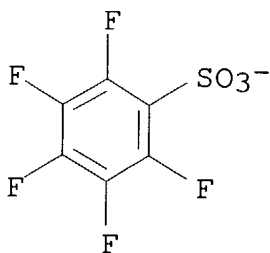
CMF C36 H28 S3



CM 2

CRN 46377-88-2

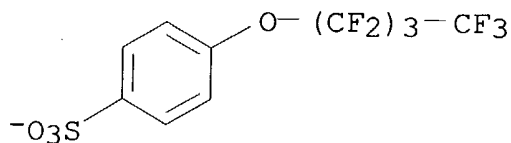
CMF C6 F5 O3 S



RN 279244-43-8 HCA
 CN Sulfonium, (oxydi-4,1-phenylene)bis[diphenyl-, salt with
 4-(nonafluorobutoxy)benzenesulfonic acid (1:2) (9CI) (CA INDEX
 NAME)

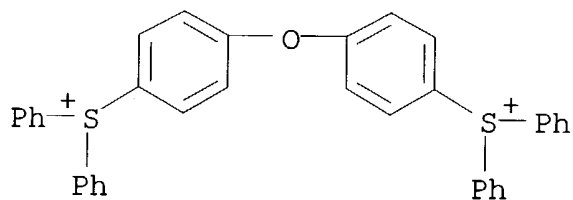
CM 1

CRN 279244-42-7
 CMF C10 H4 F9 O4 S



CM 2

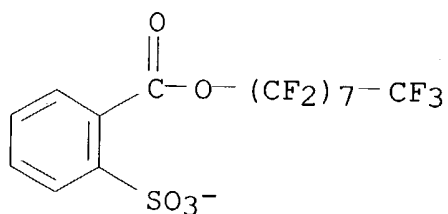
CRN 279244-41-6
 CMF C36 H28 O S2



RN 405893-15-4 HCA
 CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
 1-(heptafluorooctyl) 2-sulfobenzoate (1:2) (9CI) (CA INDEX
 NAME)

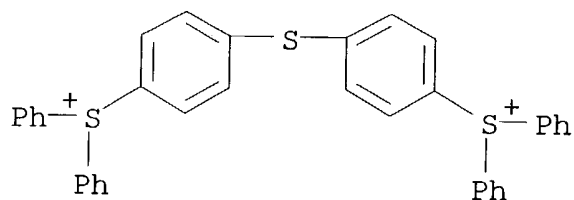
CM 1

CRN 270563-97-8
CMF C15 H4 F17 O5 S



CM 2

CRN 74227-34-2
CMF C36 H28 S3



IT 142952-62-3 149614-53-9 158593-28-3
177984-02-0 177984-03-1 279244-37-0
288620-13-3 359434-80-3 405893-14-3
405893-17-6

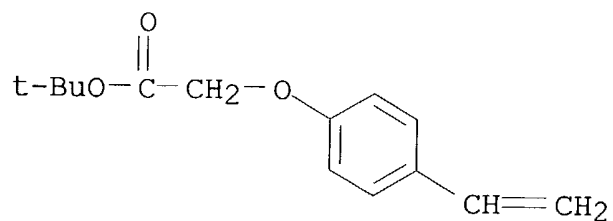
(binder; electron beam and x-ray pos. **resist** compn.
contg.)

RN 142952-62-3 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer
with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

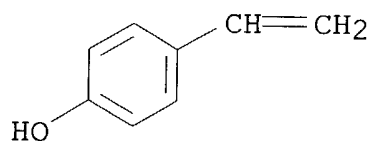
CRN 142952-61-2
CMF C14 H18 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



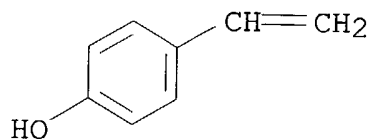
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

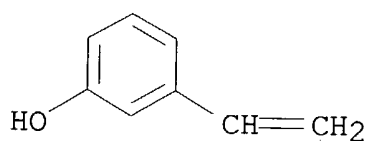
CMF C8 H8 O



CM 2

CRN 620-18-8

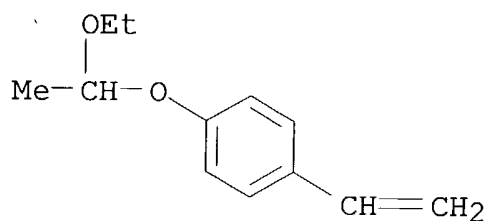
CMF C8 H8 O



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

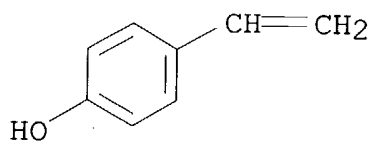
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

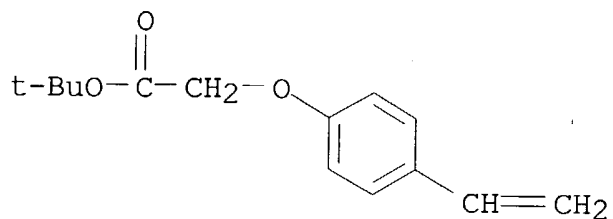
CRN 2628-17-3
CMF C8 H8 O



RN 177984-02-0 HCA
CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer
with 4-ethenylcyclohexanol and 4-ethenylphenol (9CI) (CA INDEX
NAME)

CM 1

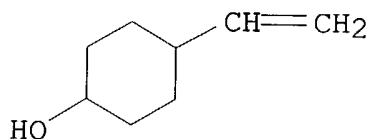
CRN 142952-61-2
CMF C14 H18 O3



CM 2

CRN 76123-09-6

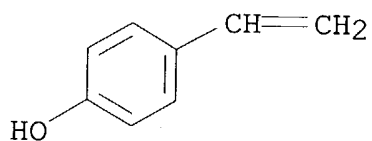
CMF C8 H14 O



CM 3

CRN 2628-17-3

CMF C8 H8 O



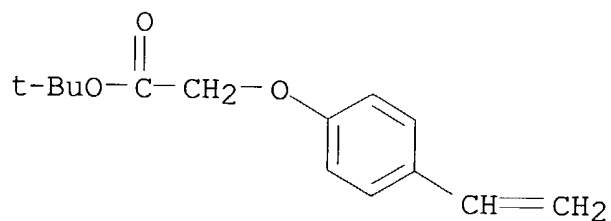
RN 177984-03-1 HCA

CN Acetic acid, (4-ethenylphenoxy)-, 1,1-dimethylethyl ester, polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142952-61-2

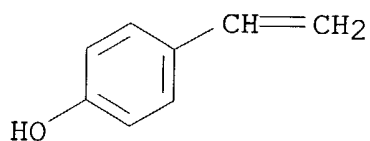
CMF C14 H18 O3



CM 2

CRN 2628-17-3

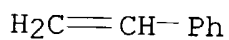
CMF C8 H8 O



CM 3

CRN 100-42-5

CMF C8 H8



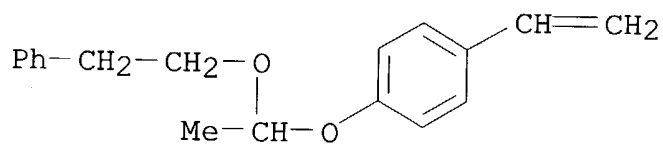
RN 279244-37-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

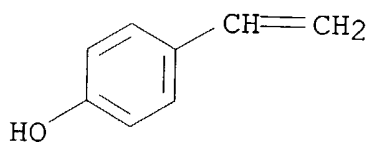
CMF C18 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



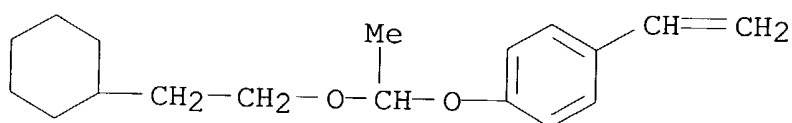
RN 288620-13-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

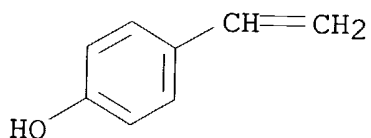
CMF C18 H26 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



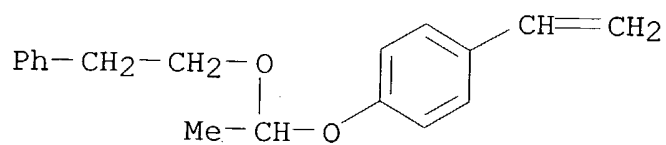
RN 359434-80-3 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

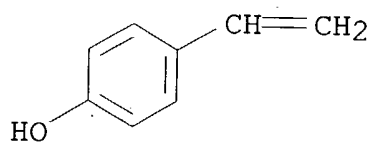
CRN 246157-37-9

CMF C18 H20 O2



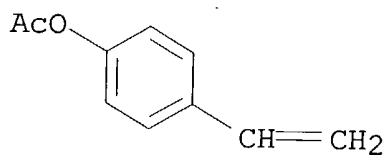
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 2628-16-2
CMF C10 H10 O2

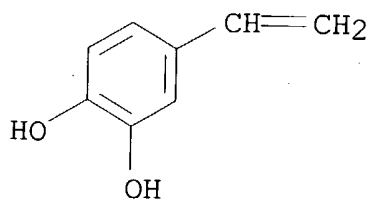


RN 405893-14-3 HCA

CN 1,2-Benzenediol, 4-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

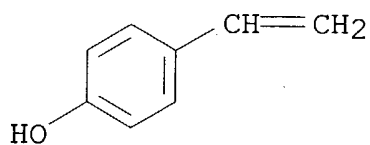
CRN 6053-02-7
CMF C8 H8 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



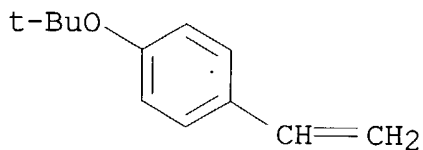
RN 405893-17-6 HCA

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with
1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

CRN 95418-58-9

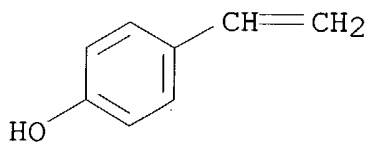
CMF C12 H16 O



CM 2

CRN 2628-17-3

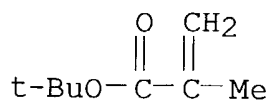
CMF C8 H8 O



CM 3

CRN 585-07-9

CMF C8 H14 O2



IT 24979-70-2, VP-5000
(binder; electron beam and x-ray pos. **resist** compn. contg.)

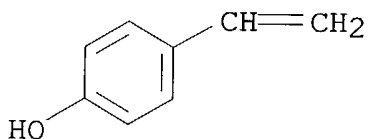
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



IT 405893-13-2P
(electron beam and x-ray pos. **resist** compn. contg.)

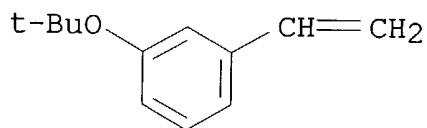
RN 405893-13-2 HCA

CN Phenol, 3-ethenyl-, polymer with 1-(1,1-dimethylethoxy)-3-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 105612-79-1

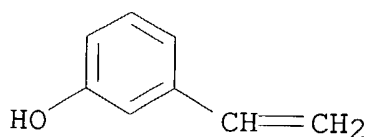
CMF C12 H16 O



CM 2

CRN 620-18-8

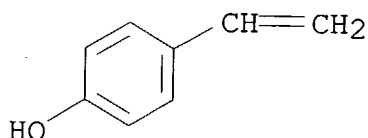
CMF C8 H8 O



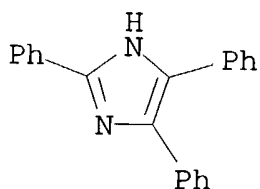
IT **24979-70-2DP**, VP-8000, reaction product with
dibutyl-dicarbonate or cyclohexylphenoxyethyl vinyl ether
(electron beam and x-ray pos. **resist** compn. contg.)
RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3
CMF C8 H8 O



IT **484-47-9**, 2,4,5-Triphenylimidazole
(org. basic compd.; electron beam and x-ray pos. **resist**
compn. contg.)
RN 484-47-9 HCA
CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 35, 38
ST electron beam x ray **resist** compn solvent
IT Electron beam **resists**
X-ray **resists**
(pos.-working; electron beam and x-ray pos. **resist**
compn.)

- IT Polysiloxanes, uses
(surfactant; electron beam and x-ray pos. **resist** compn. contg.)
- IT 153698-46-5 258341-98-9 270563-92-3 270563-93-4
270563-96-7 279244-43-8 279244-45-0
398457-16-4 405893-15-4 405893-16-5
(acid generator; electron beam and x-ray pos. **resist** compn. contg.)
- IT 142952-62-3 149614-53-9 158593-28-3
177984-02-0 177984-03-1 279244-37-0
288620-13-3 359434-80-3 405893-14-3
405893-17-6 405893-18-7
(binder; electron beam and x-ray pos. **resist** compn. contg.)
- IT 24979-70-2, VP-5000
(binder; electron beam and x-ray pos. **resist** compn. contg.)
- IT 41440-39-5P
(cationically polymerizable compd.; electron beam and x-ray pos. **resist** compn. contg.)
- IT 502-44-3, .epsilon.-Caprolactone 623-27-8, Terephthalaldehyde
765-14-0 929-37-3 2182-55-0 4223-11-4 4413-28-9
25085-99-8, Epikote 825 50856-25-2 92268-17-2 160768-40-1
(cationically polymerizable compd.; electron beam and x-ray pos. **resist** compn. contg.)
- IT 153698-63-6P 153698-65-8P 153698-69-2P 196709-88-3P
(dissoln. inhibiting compd.; electron beam and x-ray pos. **resist** compn. contg.)
- IT 152151-64-9
(dissoln. inhibiting compd.; electron beam and x-ray pos. **resist** compn. contg.)
- IT 24979-77-9DP, Poly(3-acetoxystyrene), partially hydrolyzed
405893-13-2P
(electron beam and x-ray pos. **resist** compn. contg.)
- IT 24979-70-2DP, VP-8000, reaction product with
dibutyl-dicarbonate or cyclohexylphenoxyethyl vinyl ether
105649-65-8DP, Poly(3-tert-butoxystyrene), hydrolyzed
160309-96-6DP, t-Butylmethacrylate-p-acetoxystyrene copolymer,
hydrolyzed
(electron beam and x-ray pos. **resist** compn. contg.)
- IT 95418-59-0DP, p-tert-Butoxystyrene-styrene copolymer, hydrolyzed
(electron beam and x-ray pos. **resist** compn. contg.)
- IT 484-47-9, 2,4,5-Triphenylimidazole
(org. basic compd.; electron beam and x-ray pos. **resist** compn. contg.)
- IT 65-85-0, Benzoic acid, reactions 110-75-8, 2-Chloroethyl vinyl
ether 110-87-2, 3,4-Dihydro-2H-pyran 1131-60-8,
p-Cyclohexylphenol 5292-43-3, tert-Butyl bromoacetate

24424-99-5, Di-tert-butyl-dicarbonate 76937-83-2 110726-28-8
 148452-55-5, 1,3,3,5-Tetrakis(4-hydroxyphenyl)pentane 153698-47-6,
 Cumyl bromoacetate

(prepn. of electron beam and x-ray pos. **resist** compn.)

IT 212555-24-3P, 4-Cyclohexylphenoxyethyl vinyl ether

(prepn. of electron beam and x-ray pos. **resist** compn.)

IT 96-48-0, .gamma.-Butyrolactone 96-49-1, Ethylene carbonate

97-64-3, Ethyl lactate 108-32-7, Propylene carbonate 110-43-0,
 2-Heptanone 123-86-4, Butyl acetate 763-69-9, Ethyl

3-ethoxypropionate 1320-67-8, Propylene glycol monomethyl ether

84540-57-8, Propylene glycol monomethyl ether acetate 98516-33-7,

Propylene glycol monomethyl ether propionate

(solvent; electron beam and x-ray pos. **resist** compn.
 contg.)

L46 ANSWER 19 OF 23 HCA . COPYRIGHT 2004 ACS on STN

135:364521 Positively-working chemically amplified radiation-sensitive
 resin composition containing carboxylic acid-generating agent.

Kanna, Shinichi; Kodama, Kunihiro (Fuji Photo Film Co., Ltd.,
 Japan). Jpn. Kokai Tokkyo Koho JP 2001318464 A2 20011116, 36 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-137461 20000510.

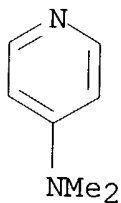
AB The compn. contains a resin, whose soly. to an alk. developer is
 enhanced by acids, an agent generating a carboxylic acid with mol.
 wt. .ltoreq.100 under radiation irradiation, a surfactant, and a
 solvent. The compn. shows high resolving power and provides good
 pattern profile even if the compn. is left for a while after
 exposure before heating and developing.

IT 1122-58-3 3001-72-7

(in pos.-working chem. amplified radiation-sensitive resin compn.
 contg. carboxylic acid-generating agent)

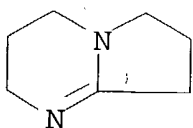
RN 1122-58-3 HCA

CN 4-Pyridinamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA

CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
 (CA INDEX NAME)



IT **279244-37-0P**, p-[1-(Cyclohexylethoxy)ethoxy]styrene-p-hydroxystyrene copolymer **372968-15-5P**
 (pos.-working chem. amplified radiation-sensitive resin compn. contg. carboxylic acid-generating agent)

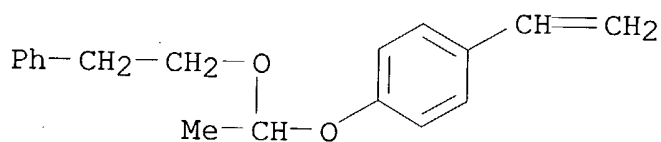
RN 279244-37-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

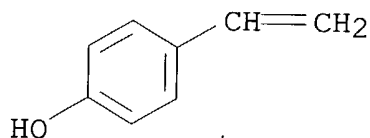
CMF C18 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



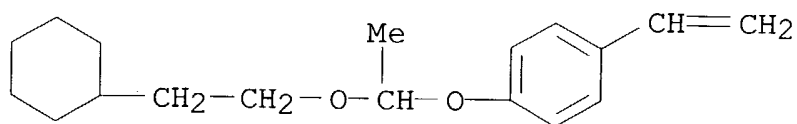
RN 372968-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

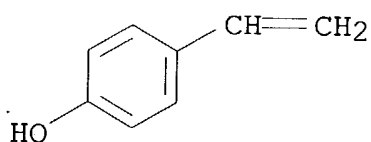
CMF C18 H26 O2



CM 2

CRN 2628-17-3

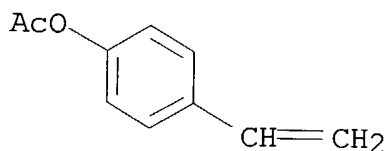
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2



IT 158593-28-3, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene
 copolymer 288620-15-5, p-[1-(Benzyloxy)ethoxy]styrene-p-
 hydroxystyrene copolymer 325143-37-1 359434-80-3
 (pos.-working chem. amplified radiation-sensitive resin compn.
 contg. carboxylic acid-generating agent)

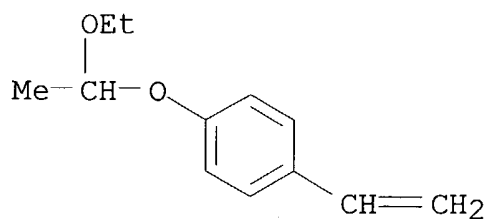
RN 158593-28-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
 (9CI) (CA INDEX NAME)

CM 1

CRN 157057-20-0

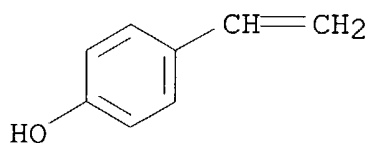
CMF C12 H16 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



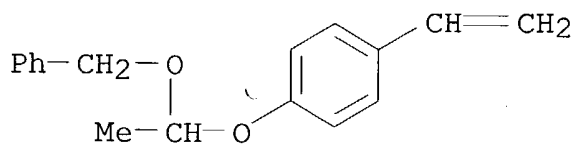
RN 288620-15-5 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(phenylmethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-14-4

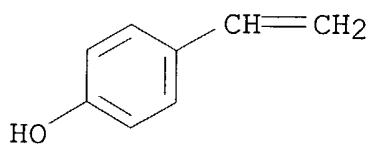
CMF C17 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



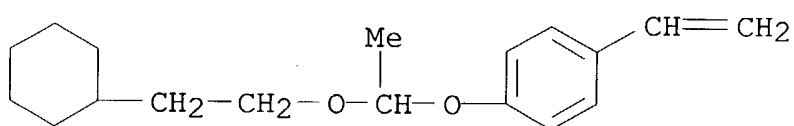
RN 325143-37-1 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(2-cyclohexylethoxy)ethoxy]-4-ethenylbenzene and 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 288620-12-2

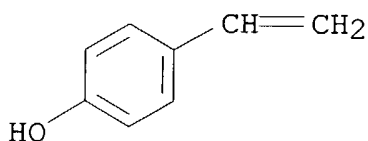
CMF C18 H26 O2



CM 2

CRN 2628-17-3

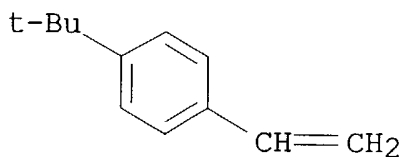
CMF C8 H8 O



CM 3

CRN 1746-23-2

CMF C12 H16



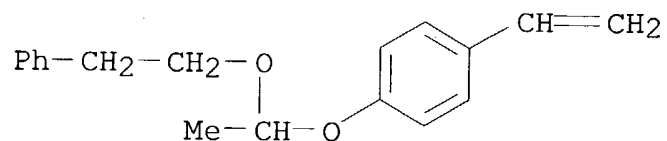
RN 359434-80-3 HCA

CN Phenol, 4-ethenyl-, polymer with 4-ethenylphenyl acetate and 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

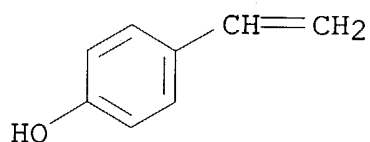
CMF C18 H20 O2



CM 2

CRN 2628-17-3

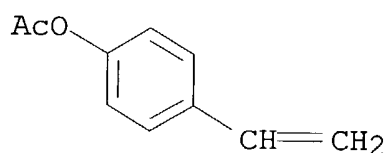
CMF C8 H8 O



CM 3

CRN 2628-16-2

CMF C10 H10 O2

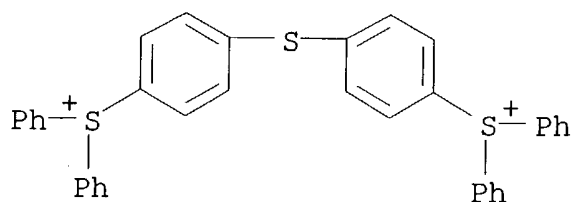


IT 74227-34-2

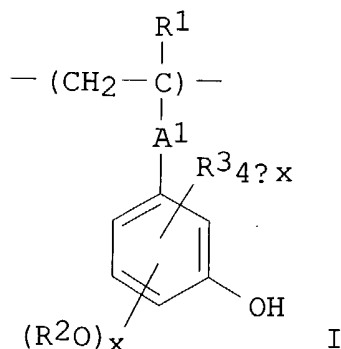
(pos.-working chem. amplified radiation-sensitive resin compn.
contg. carboxylic acid-generating agent prepd. from)

RN 74227-34-2 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl- (9CI) (CA INDEX
NAME)



- IC ICM G03F007-039
ICS C08F212-14; C08K005-00; C08K005-16; C08L025-18; C08L101-14;
G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
- ST pos working chem amplified radiation **resist**; radiation
carboxylic acid sensitive **photoresist**; alk developer pos
working radiation **resist**
- IT **Resists**
(radiation-sensitive; pos.-working chem. amplified
radiation-sensitive resin compn. contg. carboxylic
acid-generating agent)
- IT **1122-58-3 3001-72-7**
(in pos.-working chem. amplified radiation-sensitive resin compn.
contg. carboxylic acid-generating agent)
- IT **279244-37-0P**, p-[1-(Cyclohexylethoxy)ethoxy]styrene-p-
hydroxystyrene copolymer **372968-15-5P**
(pos.-working chem. amplified radiation-sensitive resin compn.
contg. carboxylic acid-generating agent)
- IT **158593-28-3**, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene
copolymer **288620-15-5**, p-[1-(Benzyloxy)ethoxy]styrene-p-
hydroxystyrene copolymer **325143-37-1 359434-80-3**
(pos.-working chem. amplified radiation-sensitive resin compn.
contg. carboxylic acid-generating agent)
- IT 64-19-7, Acetic acid, reactions 945-51-7, Diphenyl sulfoxide
2217-79-0, Diphenyliodonium iodide 6553-96-4, 2,4,6-
Triisopropylbenzenesulfonyl chloride 25155-30-0, Sodium
dodecylbenzenesulfonate **74227-34-2** 270564-02-8,
Tetramethylammonium pentafluorobenzenesulfonate
(pos.-working chem. amplified radiation-sensitive resin compn.
contg. carboxylic acid-generating agent prepd. from)
- L46 ANSWER 20 OF 23 HCA COPYRIGHT 2004 ACS on STN
135:114443 Negative-working **resist** composition. Uenishi,
Kazuya; Adegawa, Yutaka; Shirakawa, Koji (Fuji Photo Film Co., Ltd.,
Japan). Eur. Pat. Appl. EP 1117002 A1 20010718, 87 pp. DESIGNATED
STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW.
APPLICATION: EP 2001-100188 20010117. PRIORITY: JP 2000-8229
20000117; JP 2000-151477 20000523; JP 2000-235949 20000803.
- GI

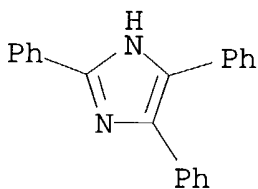


AB The invention relates to a neg.-working compn. useful in ultramicro-lithog. or other photofabrication for prodn. of VLSI or high-capacity microchips and to a neg.-working **photoresists** that can provide micropatterns using X-ray or electron beam, and that can be used in miniaturization processing of semiconductor devices using electron beams. The chem. amplification system neg.-working **resist** compn. for an electron beam and/or an x-ray, has excellent in sensitivity and resoln. and has a rectangular profile, comprising an alkali-sol. resin having structural units represented by (I), a compd. generating an acid by irradiation of the electron beam or the x-ray, and a crosslinking agent which initiates crosslinking by the acid.

IT **484-47-9P**, 2,4,5-Triphenylimidazole **24979-70-2P**, Poly(4-hydroxystyrene)
(neg.-working **photoresist** compn. for X-ray or electron beam lithog. contg.)

RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



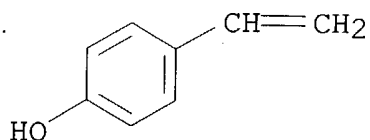
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



IT 270563-96-7P 270563-98-9P 349619-88-1P

(photoacid generator; acid generating agent in neg.-working
photoresist compn. for X-ray or electron beam lithog.)

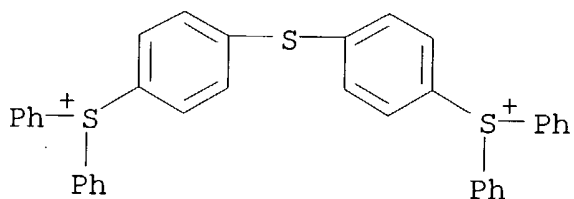
RN 270563-96-7 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

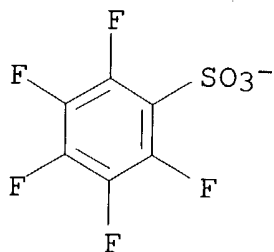
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



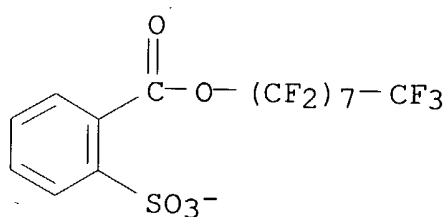
RN 270563-98-9 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with
1-(heptafluorooctyl) 2-sulfobenzoate (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 270563-97-8

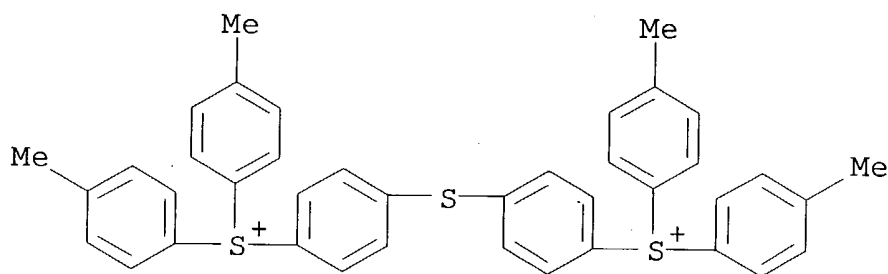
CMF C15 H4 F17 O5 S



CM 2

CRN 222722-48-7

CMF C40 H36 S3



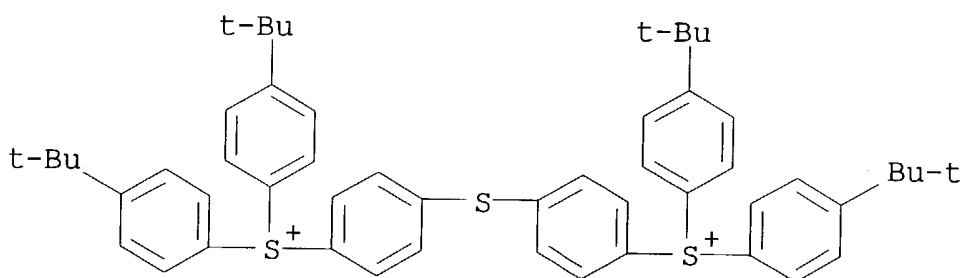
RN 349619-88-1 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(1,1-dimethylethyl)phenyl]-, salt with 4-fluorobenzenesulfonic acid (1:2)
(9CI) (CA INDEX NAME)

CM 1

CRN 343629-56-1

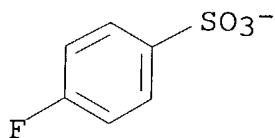
CMF C52 H60 S3



CM 2

CRN 61657-38-3

CMF C6 H4 F O3 S



IT 24979-69-9P, Poly(3-hydroxystyrene) 24979-73-5P,
 3-Hydroxystyrene-styrene copolymer 149614-53-9P,
 3-Hydroxystyrene-4-hydroxystyrene copolymer 349619-43-8P
 349619-47-2P 349619-51-8P 349619-56-3P
 349619-61-0P 349619-65-4P 349619-68-7P
 349619-72-3P 349619-76-7P 349619-80-3P

(synthesis of alkali-sol. polymer resin for neg.-working
photoresist compn. for X-ray or electron beam lithog.)

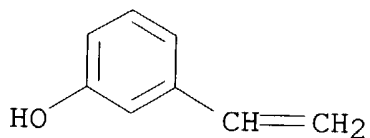
RN 24979-69-9 HCA

CN Phenol, 3-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 620-18-8

CMF C8 H8 O



RN 24979-73-5 HCA

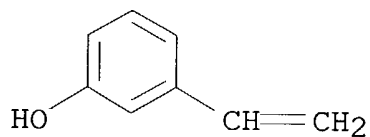
CN Phenol, 3-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX

NAME)

CM 1

CRN 620-18-8

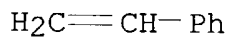
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



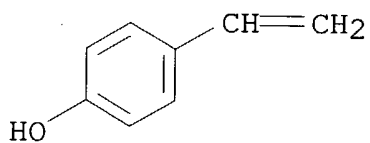
RN 149614-53-9 HCA

CN Phenol, 3-ethenyl-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

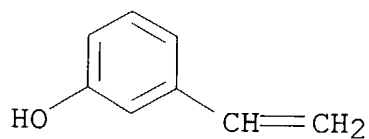
CMF C8 H8 O



CM 2

CRN 620-18-8

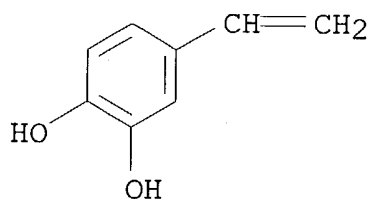
CMF C8 H8 O



RN 349619-43-8 HCA
CN 1,2-Benzenediol, 4-ethenyl-, polymer with 3-ethenylphenol (9CI) (CA
INDEX NAME)

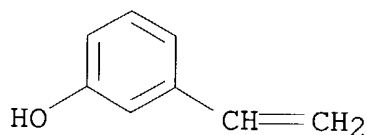
CM 1

CRN 6053-02-7
CMF C8 H8 O2



CM 2

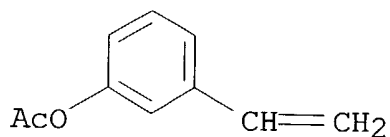
CRN 620-18-8
CMF C8 H8 O



RN 349619-47-2 HCA
CN Phenol, 3-ethenyl-, polymer with 3-ethenylphenyl acetate (9CI) (CA
INDEX NAME)

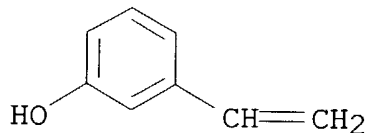
CM 1

CRN 2454-30-0
CMF C10 H10 O2



CM 2

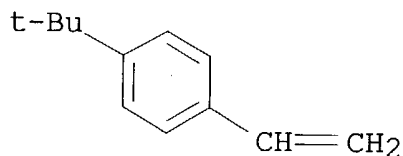
CRN 620-18-8
CMF C8 H8 O



RN 349619-51-8 HCA
CN Phenol, 3-ethenyl-, polymer with 1-(1,1-dimethylethyl)-4-ethenylbenzene (9CI) (CA INDEX NAME)

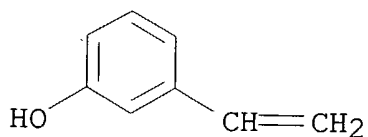
CM 1

CRN 1746-23-2
CMF C12 H16



CM 2

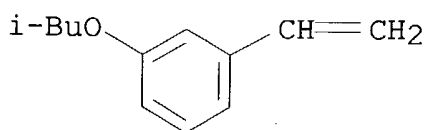
CRN 620-18-8
CMF C8 H8 O



RN 349619-56-3 HCA
CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-3-(2-methylpropoxy)benzene (9CI) (CA INDEX NAME)

CM 1

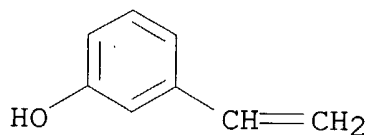
CRN 349619-55-2
CMF C12 H16 O



CM 2

CRN 620-18-8

CMF C8 H8 O



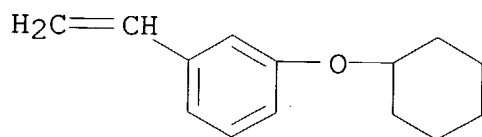
RN 349619-61-0 HCA

CN Phenol, 3-ethenyl-, polymer with 1-(cyclohexyloxy)-3-ethenylbenzene
(9CI) (CA INDEX NAME)

CM 1

CRN 349619-60-9

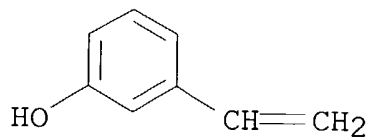
CMF C14 H18 O



CM 2

CRN 620-18-8

CMF C8 H8 O



RN 349619-65-4 HCA

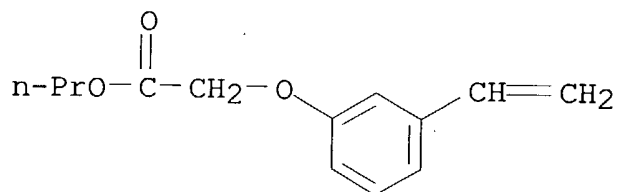
CN Acetic acid, (3-ethenylphenoxy)-, propyl ester, polymer with

3-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 349619-64-3

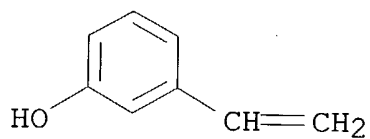
CMF C13 H16 O3



CM 2

CRN 620-18-8

CMF C8 H8 O



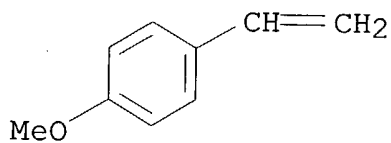
RN 349619-68-7 HCA

CN Phenol, 3-ethenyl-, polymer with 1-ethenyl-4-methoxybenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 637-69-4

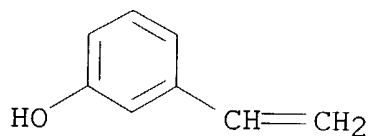
CMF C9 H10 O



CM 2

CRN 620-18-8

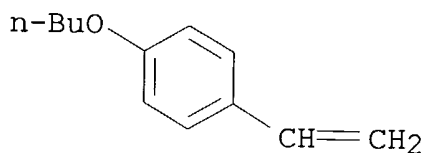
CMF C8 H8 O



RN 349619-72-3 HCA
CN Phenol, 3-ethenyl-, polymer with 1-butoxy-4-ethenylbenzene (9CI)
(CA INDEX NAME)

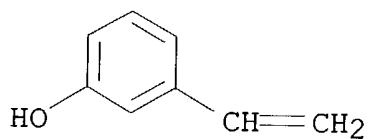
CM 1

CRN 105337-03-9
CMF C12 H16 O



CM 2

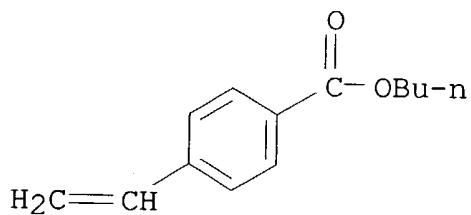
CRN 620-18-8
CMF C8 H8 O



RN 349619-76-7 HCA
CN Benzoic acid, 4-ethenyl-, butyl ester, polymer with 3-ethenylphenol
(9CI) (CA INDEX NAME)

CM 1

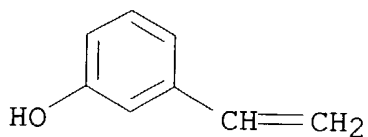
CRN 2715-41-5
CMF C13 H16 O2



CM 2

CRN 620-18-8

CMF C8 H8 O



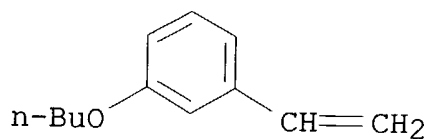
RN 349619-80-3 HCA

CN Phenol, 3-ethenyl-, polymer with 1-butoxy-3-ethenylbenzene (9CI)
(CA INDEX NAME)

CM 1

CRN 156660-60-5

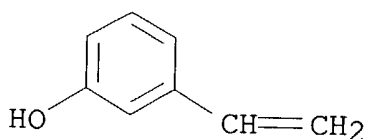
CMF C12 H16 O



CM 2

CRN 620-18-8

CMF C8 H8 O

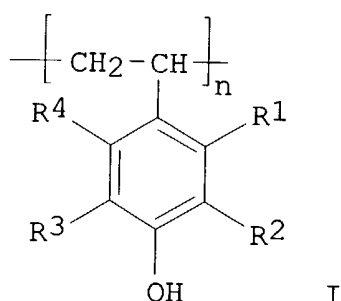


- IC ICM G03F007-004
ICS G03F007-038
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 36, 76
- ST neg **photoresist** crosslinking agent hydroxystyrene polymer
- IT **Photoresists**
(chem.-amplified; neg.-working **photoresist** compn. for X-ray or electron beam lithog. contg. alkali-sol. resin and acidic crosslinking agent)
- IT Crosslinking agents
Electron beam lithography
X-ray lithography
(neg.-working **photoresist** compn. for X-ray or electron beam lithog. contg. alkali-sol. resin and acidic crosslinking agent)
- IT 3089-11-0P 32449-09-5P
(crosslinking agent; crosslinking agent in neg.-working **photoresist** compn. for X-ray or electron beam lithog.)
- IT 484-47-9P, 2,4,5-Triphenylimidazole 24979-70-2P,
Poly(4-hydroxystyrene) 27029-76-1P
(neg.-working **photoresist** compn. for X-ray or electron beam lithog. contg.)
- IT 220122-68-9P 270563-92-3P 270563-93-4P 270563-96-7P
270563-98-9P 349619-84-7P 349619-88-1P
349619-92-7P 349619-96-1P
(photoacid generator; acid generating agent in neg.-working **photoresist** compn. for X-ray or electron beam lithog.)
- IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate
(photoacid generator; synthesis of acid-generating agent for neg.-working **photoresist** compn. for X-ray or electron beam lithog.)
- IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P
185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P
197087-74-4P
(synthesis of acid crosslinking agent for neg.-working **photoresist** compn. for X-ray or electron beam lithog.)
- IT 258341-98-9P 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate
(synthesis of acid-generating agent for neg.-working **photoresist** compn. for X-ray or electron beam lithog.)
- IT 24979-69-9P, Poly(3-hydroxystyrene) 24979-73-5P,
3-Hydroxystyrene-styrene copolymer 149614-53-9P,
3-Hydroxystyrene-4-hydroxystyrene copolymer 349619-43-8P
349619-47-2P 349619-51-8P 349619-56-3P
349619-61-0P 349619-65-4P 349619-68-7P
349619-72-3P 349619-76-7P 349619-80-3P

(synthesis of alkali-sol. polymer resin for neg.-working
photoresist compn. for X-ray or electron beam lithog.)

L46 ANSWER 21 OF 23 HCA COPYRIGHT 2004 ACS on STN
134:123569 Positive-working **photoresist** composition and
pattern-formation using it. Yamanaka, Tsukasa (Fuji Photo Film Co.,
Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001013685 A2 (20010119, 45
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-181820
19990628.

GI



AB The title **photoresist** compn. contains (a) an alkali-sol.
resin comprising repeating units $[\text{CH}_2\text{CH}(\text{C}_6\text{H}_4\text{OH-p})]_m$, I, and
 $[\text{CH}_2\text{CHX}]_k$ [R1-4 = H, X = arom. substituent; 0.3.ltoreq.m.ltoreq.0.90;
0.05.ltoreq.n.ltoreq.0.30; 0.05.ltoreq.k.ltoreq.0.40], (b) a compd.
having groups that are cleaved by the action of acid, (c) a compd.
generating an acid by irradiation with actinic rays or radiation, and
(d) an org. basic compd. The compn. is applied on a substrate,
patternwise exposed, baked, and developed with 2.38% aq. Me4NOH
soln. to form a **resist** pattern. The compn. shows high
sensitivity toward actinic rays or radiation, esp. far UV radiation,
developability, and thermal resistance and provides high resolu.
patterns with good profile.

IT 214208-08-9

(acid generator; pos. **photoresist** compn. contg.
alkali-sol. resin, acid-decomposable compd., acid generator, and
basic compd.)

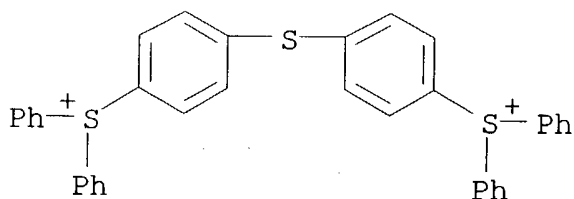
RN 214208-08-9 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
dodecylbenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 74227-34-2

CMF C36 H28 S3

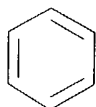


CM 2

CRN 1330-69-4

CMF C18 H29 O3 S

CCI IDS

D1-SO₃⁻Me-(CH₂)₁₁-D1

IT 24979-74-6DP, 4-Hydroxystyrene-styrene copolymer, reaction products with methylolphenol 321164-59-4DP, 4-Hydroxystyrene-1-vinylnaphthalene copolymer, reaction products with methylolphenol

(pos. **photoresist** compn. contg. alkali-sol. resin, acid-decomposable compd., acid generator, and basic compd.)

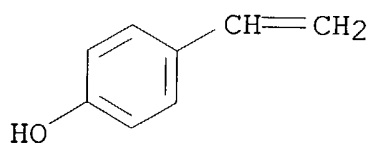
RN 24979-74-6 HCA

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

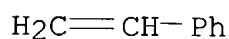
CMF C8 H8 O



CM 2

CRN 100-42-5

CMF C8 H8



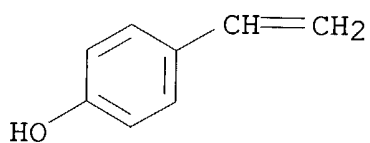
RN 321164-59-4 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenylnaphthalene (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

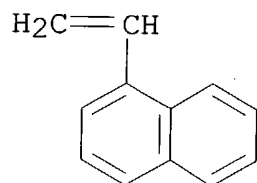
CMF C8 H8 O



CM 2

CRN 826-74-4

CMF C12 H10

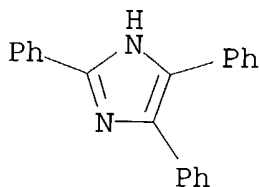


IT 484-47-9 3001-72-7

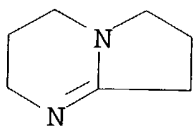
(pos. photoresist compn. contg. alkali-sol. resin,
acid-decomposable compd., acid generator, and basic compd.)

RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)



RN 3001-72-7 HCA

CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)

IC ICM G03F007-039

ICS C08F002-46; C08L025-18; G03F007-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38ST **photoresist** pos alkali soluble resin; acid decomposable
compd **photoresists**; base acid generator
photoresistIT Positive **photoresists**(pos. **photoresist** compn. contg. alkali-sol. resin,
acid-decomposable compd., acid generator, and basic compd.)IT 153698-54-5 153698-63-6
(acid decomposable compd.; pos. **photoresist** compn.
contg. alkali-sol. resin, acid-decomposable compd., acid
generator, and basic compd.)IT 197447-16-8 **214208-08-9** 224568-31-4
(acid generator; pos. **photoresist** compn. contg.
alkali-sol. resin, acid-decomposable compd., acid generator, and
basic compd.)IT 75-59-2, Tetramethylammonium hydroxide
(developer; pos. **photoresist** compn. contg. alkali-sol.
resin, acid-decomposable compd., acid generator, and basic
compd.)IT 4397-14-2DP, 2,6-Dimethyl-4-methylolphenol, reaction products with
hydroxystyrene copolymer **24979-74-6DP**,
4-Hydroxystyrene-styrene copolymer, reaction products with
methylolphenol **321164-59-4DP**, 4-Hydroxystyrene-1-

vinyl naphthalene copolymer, reaction products with methylolphenol
(pos. **photoresist** compn. contg. alkali-sol. resin,
acid-decomposable compd., acid generator, and basic compd.)

IT 484-47-9 3001-72-7

(pos. **photoresist** compn. contg. alkali-sol. resin,
acid-decomposable compd., acid generator, and basic compd.)

L46 ANSWER 22 OF 23 HCA COPYRIGHT 2004 ACS on STN

133:81576 Positive-working **resist** composition for electron
beam and x-ray exposure. Kodama, Kunihiro; Aogo, Toshiaki; Uenishi,
Kazuya (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho
JP 2000187330 A2 20000704, 59 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1999-275334 19990928. PRIORITY: JP 1998-295609
19981016.

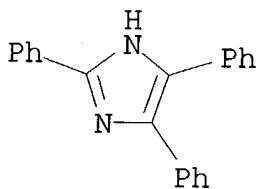
AB In the **resist** compns. contg. (a) a compd. which generates
an acid by irradiation with an electron beam and x-ray, (b) a resin
having groups which are cleaved by the action of acid to increase
the solubility in alk. developing solutions, and (c) a F-type and/or Si-type
surfactant, the acid generator is a compd. generating a
benzenesulfonic, naphthalenesulfonic or anthracenesulfonic acid
substituted with .gtoreq.1 F and/or a .gtoreq.1 F-contg. group. The
resist compns. may contain a low-mol.-wt. dissoln. inhibitor
with mol. wt. .ltoreq.3000 which has an acid-cleavable group and of
which the dissolving rate in alk. developing solutions increases by the
action of acid and a resin insol. in water and sol. in alk.
developing solutions in place of (b). The compns. show improved
developability and provide high resolution patterns with good profile.

IT 484-47-9, 2,4,5-Triphenylimidazole

(org. base; radiation-sensitive **resist** compn. contg.
acid generator, resin having acid-decomposable group, and
surfactant)

RN 484-47-9 HCA

CN 1H-Imidazole, 2,4,5-triphenyl- (9CI) (CA INDEX NAME)

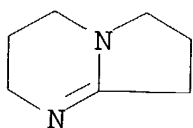


IT 3001-72-7, 1,5-Diazabicyclo[4.3.0]non-5-ene

(radiation-sensitive **resist** compn. contg. acid
generator, resin having acid-decomposable group, and surfactant)

RN 3001-72-7 HCA

CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)

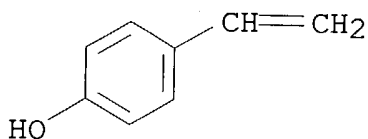


IT 24979-70-2DP, VP 8000, ethers 147625-42-1P
 158593-28-3DP, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene
 copolymer, ethers with poly(hydroxystyrene) 270563-96-7P
 279244-35-8P 279244-37-0P
 (radiation-sensitive **resist** compn. contg. acid
 generator, resin having acid-decomposable group, and surfactant)
 RN 24979-70-2 HCA
 CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



RN 147625-42-1 HCA
 CN Phenol, 4-ethenyl-, homopolymer, 1,1-dimethylethyl carbonate (9CI)
 (CA INDEX NAME)

CM 1

CRN 51300-90-4

CMF C5 H10 O3

t-Bu-O-CO₂H

CM 2

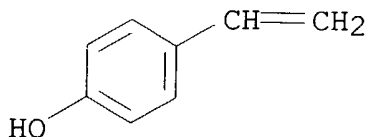
CRN 24979-70-2

CMF (C8 H8 O)x

CCI PMS

CM 3

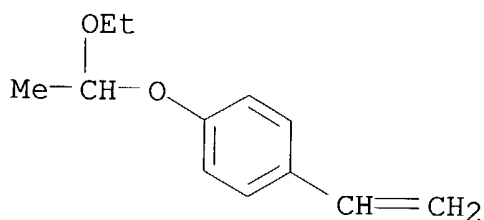
CRN 2628-17-3
CMF C8 H8 O



RN 158593-28-3 HCA
CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene
(9CI) (CA INDEX NAME)

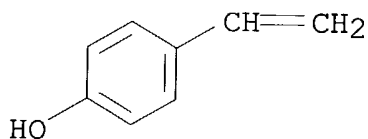
CM 1

CRN 157057-20-0
CMF C12 H16 O2



CM 2

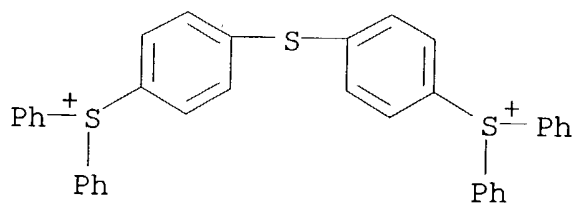
CRN 2628-17-3
CMF C8 H8 O



RN 270563-96-7 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, salt with
pentafluorobenzenesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

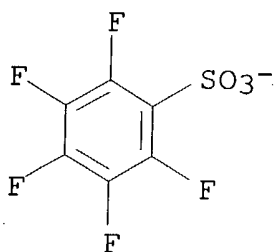
CRN 74227-34-2
CMF C36 H28 S3



CM 2

CRN 46377-88-2

CMF C6 F5 O3 S



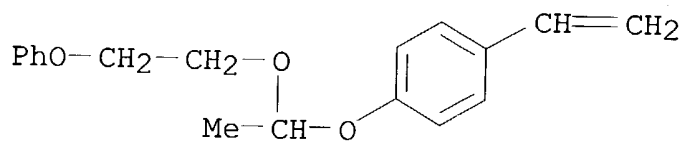
RN 279244-35-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenoxyethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 279244-34-7

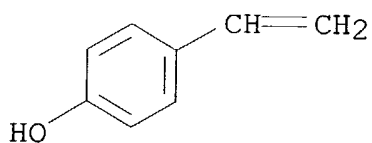
CMF C18 H20 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



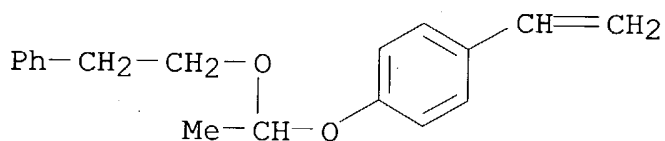
RN 279244-37-0 HCA

CN Phenol, 4-ethenyl-, polymer with 1-ethenyl-4-[1-(2-phenylethoxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 246157-37-9

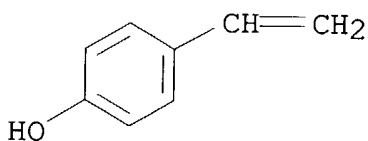
CMF C18 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IT 24979-70-2, VP 15000 196709-91-8,
p-(1-tert-Butoxyethoxy)styrene-p-hydroxystyrene copolymer
270563-98-9 279244-43-8

(radiation-sensitive **resist** compn. contg. acid
generator, resin having acid-decomposable group, and surfactant)

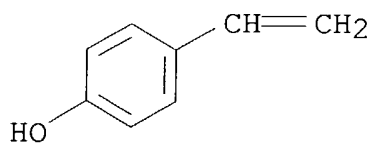
RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

CMF C8 H8 O



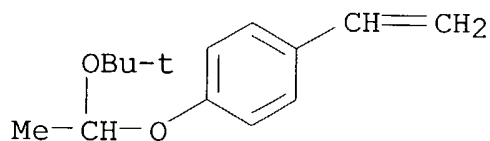
RN 196709-91-8 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 169811-45-4

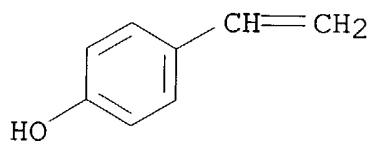
CMF C14 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



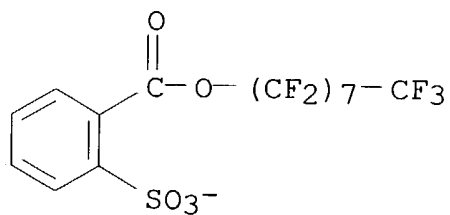
RN 270563-98-9 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis(4-methylphenyl)-, salt with 1-(heptadecafluorooctyl) 2-sulfobenzoate (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 270563-97-8

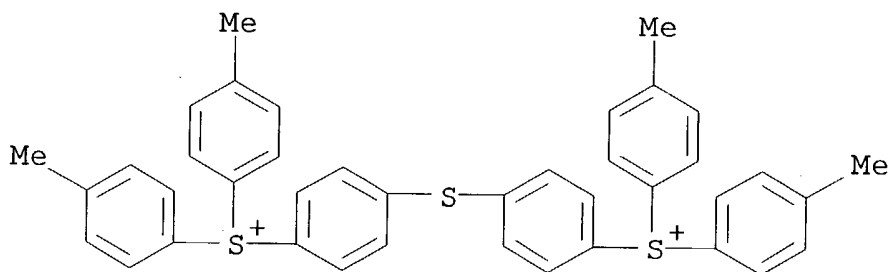
CMF C15 H4 F17 O5 S



CM 2

CRN 222722-48-7

CMF C40 H36 S3



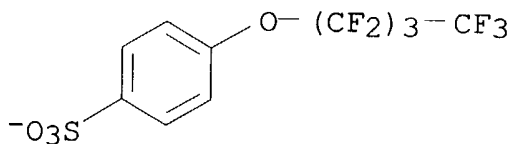
RN 279244-43-8 HCA

CN Sulfonium, (oxydi-4,1-phenylene)bis[diphenyl-, salt with
4-(nonafluorobutoxy)benzenesulfonic acid (1:2) (9CI) (CA INDEX
NAME)

CM 1

CRN 279244-42-7

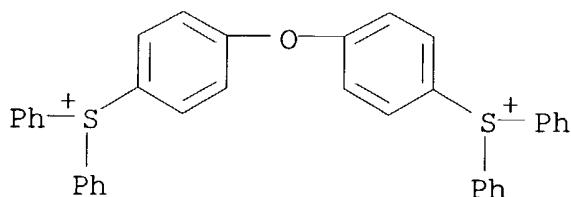
CMF C10 H4 F9 O4 S



CM 2

CRN 279244-41-6

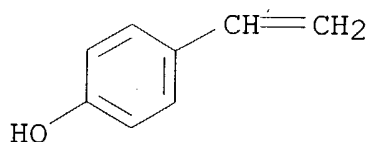
CMF C36 H28 O S2



- IC ICM G03F007-039
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
- ST radiation **resist** arom sulfonic acid generator; fluoro silicon surfactant radiation **resist**; silyl increasing agent **resist**
- IT Polysiloxanes, uses
(Troysol S 366; radiation-sensitive **resist** compn. contg. acid generator, resin having acid-decomposable group, and surfactant)
- IT **Resists**
(radiation-sensitive; radiation-sensitive **resist** compn. contg. acid generator, resin having acid-decomposable group, and surfactant)
- IT 153698-63-6P 153698-69-2P 196709-88-3P
(dissoln. inhibitor; radiation-sensitive **resist** compn. contg. acid generator, resin having acid-decomposable group, and surfactant)
- IT **484-47-9**, 2,4,5-Triphenylimidazole
(org. base; radiation-sensitive **resist** compn. contg. acid generator, resin having acid-decomposable group, and surfactant)
- IT **3001-72-7**, 1,5-Diazabicyclo[4.3.0]non-5-ene 21545-54-0
137462-24-9, Megafac F176 216679-67-3, Megafac R 08
(radiation-sensitive **resist** compn. contg. acid generator, resin having acid-decomposable group, and surfactant)
- IT **24979-70-2DP**, VP 8000, ethers 95418-59-0DP,
p-tert-Butoxystyrene-styrene copolymer, hydrolyzed
147625-42-1P 153698-46-5P, Triphenylsulfonium
pentafluorobenzenesulfonate **158593-28-3DP**,
p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer, ethers with
poly(hydroxystyrene) 160309-96-6DP, p-Acetoxystyrene-tert-butyl
methacrylate copolymer, sapon. 212555-24-3DP, ethers with
poly(hydroxystyrene) 258341-98-9P 270563-93-4P
270563-96-7P 279244-35-8P 279244-37-0P
(radiation-sensitive **resist** compn. contg. acid generator, resin having acid-decomposable group, and surfactant)

- IT 24979-70-2, VP 15000 123658-11-7 142096-70-6
153698-66-9 196709-91-8, p-(1-tert-Butoxyethoxy)styrene-p-
hydroxystyrene copolymer 270563-98-9 279244-39-2
279244-43-8 279244-45-0 279244-48-3 279244-50-7
(radiation-sensitive **resist** compn. contg. acid
generator, resin having acid-decomposable group, and surfactant)
- L46 ANSWER 23 OF 23 HCA COPYRIGHT 2004 ACS on STN
132:17147 Positive-working **photosensitive** composition.
Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai
Tokkyo Koho JP 11327149 A2 19991126 Heisei, 43 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 1999-70372 19990316. PRIORITY: JP
1998-66990 19980317.
- GI For diagram(s), see printed CA Issue.
AB The title **photosensitive** compn. contains (a) a polycyclic
basic N-contg. compd. I (Y, Z = straight-chain, branched or cyclic
alkylene which may contain heteroatoms and may be substituted), (b)
.gtoreq.1 compd. selected from II-IV [R1-37 = H, straight-chain,
branched or cyclic alkyl, straight-chain, branched or cyclic alkoxy,
OH, halo, SR38 (R38 = straight-chain, branched or cyclic alkyl,
aryl); X- = benzenesulfonic acid, naphthalenesulfonic acid or
anthracene sulfonic acid anion which has (i) .gtoreq.1 group
selected from branched or cyclic C.gtoreq.8 alkyl and alkoxy,
.gtoreq.2 groups selected from straight-chain, branched or cyclic
C4-7 alkyl and alkoxy, or .gtoreq.3 groups selected from
straight-chain, branched or cyclic C1-3 alkyl and alkoxy or (ii)
.gtoreq.1 group selected from ester, R39CO, R40CONH, R41NH,
R42CONH, R43NHCO2, R44NHCONH, R45NHCSN, R46SO2NH, and NO2 groups
(R39-46 = straight-chain, branched or cyclic alkyl, aryl)], which
generates an acid upon activating radiation irradiation, and (c) a resin
having groups which are decomposed by the action of acid to increase
the sol. in alkali developing solns. The compn. may contain (a),
(b), (d) a low-mol.-wt. dissoln.-inhibiting compd. with mol. wt.
.ltoreq.3000 which has an acid-decomposable group and of which the
sol. in alkali developing solns. increases by the action of acid,
and (e) a resin insol. in water and sol. in alkali developing solns.
The compn. shows high **photosensitivity** and provides a high
resoln. pattern with good profile independent of the elapse of time
from exposure to bake.
- IT 24979-70-2DP, VP 8000, ethers 147625-42-1P
(**photoresist** compn. contg. nitrogen-contg. basic
compd., acid generator, and alkali-sol. resin)
- RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)
- CM 1
- CRN 2628-17-3

CMF C8 H8 O



RN 147625-42-1 HCA

CN Phenol, 4-ethenyl-, homopolymer, 1,1-dimethylethyl carbonate (9CI)
(CA INDEX NAME)

CM 1

CRN 51300-90-4

CMF C5 H10 O3

t-Bu-O-CO₂H

CM 2

CRN 24979-70-2

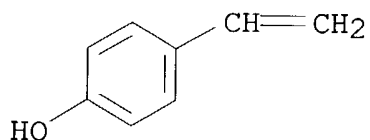
CMF (C8 H8 O)_x

CCI PMS

CM 3

CRN 2628-17-3

CMF C8 H8 O

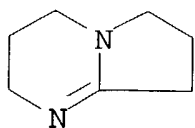


IT 3001-72-7

(photoresist compn. contg. nitrogen-contg. basic
compd., acid generator, and alkali-sol. resin)

RN 3001-72-7 HCA

CN Pyrrolo[1,2-a]pyrimidine, 2,3,4,6,7,8-hexahydro- (7CI, 8CI, 9CI)
(CA INDEX NAME)

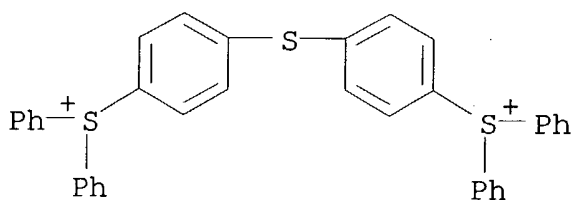


IT 203927-87-1P

(prepn. of sulfonium compd. acid generator)

RN 203927-87-1 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, diiodide (9CI) (CA INDEX NAME)

● 2 I⁻

IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photoresist** nitrogen basic compd; acid generator sulfonium
iodonium; dissoln inhibitor **photoresist**; alkali soluble
resin **photoresist**IT **Photoresists**(photoresist compn. contg. nitrogen-contg. basic
compd., acid generator, and alkali-sol. resin)

IT 153698-63-6P 153698-69-2P 196709-88-3P

(dissoln. inhibitor; **photoresist** compn. contg.
nitrogen-contg. basic compd., acid generator, and alkali-sol.
resin)IT 64-19-7DP, Acetic acid, esters with polyhydroxystyrene butoxyethyl
ether, preparation 109-53-5DP, Isobutyl vinyl ether, ethers with
polyhydroxystyrene 109-92-2DP, Ethyl vinyl ether, ethers with
polyhydroxystyrene 110-87-2DP, 2,3-Dihydro-4H-pyran, ethers with
polyhydroxystyrene **24979-70-2DP**, VP 8000, ethers**147625-42-1P** 197447-16-8P 251463-23-7P 251463-24-8P(photoresist compn. contg. nitrogen-contg. basic
compd., acid generator, and alkali-sol. resin)IT **3001-72-7** 5036-02-2 6674-22-2 84030-20-6 196709-67-8

251463-18-0 251463-21-5

(photoresist compn. contg. nitrogen-contg. basic
compd., acid generator, and alkali-sol. resin)

IT 3744-08-9P, Triphenylsulfonium iodide **203927-87-1P**
208171-92-0P, Tetramethylammonium 2,4,6-triisopropylbenzenesulfonate
(prepn. of sulfonium compd. acid generator)